PROVINCE OF BRITISH COLUMBIA

PROVINCIAL BOARD OF HEALTH

FORTY-NINTH REPORT

YEAR ENDED DECEMBER 31st

1945

PRINTED BY
AUTHORITY OF THE LEGISLATIVE ASSEMBLY.

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VICTORIA, B.C.:
Printed by CHARLES F. BANFIELD, Printer to the King's Most Excellent Majesty.
1946.

OFFICE OF THE PROVINCIAL SECRETARY,
VICTORIA, B.C., January 30th, 1946.

To His Honour W. C. WOODWARD,
Lieutenant-Governor of the Province of British Columbia.

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to present the Report of the Provincial Board of Health for the year ended December 31st, 1945.

G. S. PEARSON,
Provincial Secretary.

PROVINCIAL BOARD OF HEALTH,
VICTORIA, B.C., January 30th, 1946.

The Honourable Geo. S. Pearson,
Provincial Secretary, Victoria, B.C.

SIR,—I have the honour to submit the Forty-ninth Report of the Provincial Board of Health for the year ended December 31st, 1945.

I have the honour to be,
Sir,
Your obedient servant,

G. F. AMYOT, M.D., D.P.H.,
Provincial Health Officer.

THE PROVINCIAL BOARD OF HEALTH.

The Provincial Board of Health of British Columbia is the Lieutenant-Governor in Council, under the provisions of the "Health Act." For the year 1945 the members of the Provincial Board of Health were:—

The Hon. JOHN HART	*Premier, Minister of Finance, and President of the Executive Council.*
The Hon. G. S. PEARSON	*Provincial Secretary, Minister of Labour, and Commissioner of Fisheries.*
The Hon. R. L. MAITLAND	*Attorney-General.*
The Hon. E. T. KENNEY	*Minister of Lands and Forests.*
The Hon. K. C. MACDONALD	*Minister of Agriculture (deceased, 1945).*
The Hon. F. PUTNAM	*Minister of Agriculture (appointed, 1945).*
The Hon. E. C. CARSON	*Minister of Mines and Minister of Trade and Industry.*
The Hon. H. ANSCOMB	*Minister of Public Works, Minister of Railways, and Minister of Municipal Affairs.*
The Hon. H. G. T. PERRY	*Minister of Education (retired, 1945).*
The Hon. G. M. WEIR	*Minister of Education (appointed, 1945).*

The Hon. G. S. Pearson, Provincial Secretary, acts as Minister of Health.

SENIOR PUBLIC HEALTH TECHNICAL STAFF.

G. F. AMYOT, M.D., D.P.H.	*Provincial Health Officer.*
J. S. CULL, B.A., M.D., D.P.H.	*Deputy Provincial Health Officer.*
J. M. HERSHEY, B.Sc., M.A., Ph.D., M.D., D.P.H.	*Assistant Provincial Health Officer.*
R. BOWERING, B.Sc. (C.E.), M.A.Sc.	*Public Health Engineer.*
J. J. CARNEY, M.R.S.I., B.V.Sc.	*Consultant in Milk and Food Control.*
C. R. STONEHOUSE, C.S.I. (C.)	*Senior Sanitarian.*
Miss D. E. TATE, R.N., B.A.Sc., M.A.	*Director, Public Health Nursing*
Miss M. FRITH, R.N., B.A., B.A.Sc., M.P.H.	*Consultant, Public Health Nursing.*
Miss MARY BALDWIN, B.Sc. (H.Ec.)	*Consultant in Nutrition (resigned, 1945).*
Miss E. M. YVONNE LOVE, B.Sc. (H.Ec.)	*Consultant in Nutrition (appointed, 1945).*
C. E. DOLMAN, M.B., B.S., D.P.H., Ph.D.	*Director, Division of Laboratories.*
W. H. HATFIELD, M.D.	*Director, Division of Tuberculosis Control.*
J. D. B. SCOTT, B.A., B.Com.	*Director, Division of Vital Statistics.*
D. H. WILLIAMS, B.Sc., M.D., M.Sc.	*Director, Division of Venereal Disease Control.*
W. C. MOONEY, M.D., D.P.H.	*Assistant Director, Division of Venereal Disease Control.*

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REPORT of the PROVINCIAL BOARD OF HEALTH

YEAR ENDED DECEMBER 31st, 1945.

G. F. AMYOT, M.D., D.P.H., PROVINCIAL HEALTH OFFICER.

INTRODUCTION.

This Forty-ninth Annual Report of the Provincial Board of Health for the year 1945 provides an opportunity to present a summary of the extensive and varied programme of the Provincial Health Services. It is gratifying to be able to record considerable progress in health services during this year of transition from war to what is hoped will be a period of peace and progress. The termination of hostilities did not bring the hoped-for solution of many of the health problems but instead created many new situations that had to be met with the same greatly curtailed services.

One of the most difficult problems at present is the shortage of trained public health personnel. There now are two Health Units without Directors and little chance of procuring suitable trained public health physicians to fill these positions at least for some months. However, there is hope that in the early summer it will be possible to obtain a number of newly trained public health physicians who have returned from the armed forces to the School of Hygiene, University of Toronto, to undertake their public health studies. If a sufficient number of these trained personnel are available, it should be possible to continue to extend the much needed programme of full-time local Health Units to serve other parts of the Province not now enjoying this type of modern public health service. There is also need for new personnel in the central services of the Provincial Board of Health to bring these up to a strength sufficient to handle the routine procedures. Additions to the central staff will also permit the development of new programmes that are essential if the people of British Columbia are to benefit fully from the newest developments in the field of public health.

This report presents the work of the various Divisions and other services of the Provincial Board of Health, including those health services located in many rural parts of the Province, and a summary of the activities of the Divisions of Vital Statistics, Tuberculosis Control, and Venereal Disease Control, which Divisions publish a more complete report later on in the year. All other reports, except Tuberculosis Control, Venereal Disease Control, and Vital Statistics, are the final annual reports.

Some relief was experienced, in the last few months of the year, in obtaining greatly needed public health personnel for some of the Provincial Health Services. Dr. J. M. Hershey was appointed Assistant Provincial Health Officer to undertake the supervision and co-ordination of all Provincial Health Services in the Greater Vancouver area and to act as liaison officer to local health services

and other related services in that area, and at the same time to provide certain additional help in the Victoria headquarters of the Provincial Board of Health.

Dr. J. S. Cull was raised to the rank of Deputy Provincial Health Officer, which enables him to sign certain documents on behalf of the Provincial Health Officer and also gives him an opportunity to perform further greatly needed services which are essential if the Provincial Health Services are to expand rapidly enough to meet the growing health demands and needs of the people of the Province. These changes should simplify central administration considerably and provide a closer link between the various Divisions of the Provincial Board of Health and headquarters and local health services.

At last a start has been made in the field of public health education. Miss Kathleen McNevin, who was granted a fellowship by the W. K. Kellogg Foundation to take studies in the advanced School of Public Health Education in the University of North Carolina, will return from her studies early in January and undertake the many duties waiting for her in this important new advance in the public health field in British Columbia. Miss McNevin is to be appointed Consultant in Public Health Education. The course undertaken in North Carolina has only been in operation for three years and meets more adequately than any other course the needs in modern public health education. A place in this class was provided for Miss McNevin through the co-operation of the School of Public Health of the University of North Carolina, the United States Public Health Service, and the W. K. Kellogg Foundation, who granted the fellowship. Forty-five students from both the North and South American Continents were registered in this course. Miss McNevin was the only Canadian.

Mr. A. R. Peers, who was the only commissioned officer in the Canadian Army in the field of general sanitation who did not have a degree in medicine or public health, has been chosen as a sanitarian on the staff of the Provincial Board of Health to undertake extended duties in the broad field of sanitation, particularly those in connection with tourist accommodation in the Province. It is anticipated that this new development will greatly assist in extending the interest now being shown in the development of adequate, safe, sanitary tourist accommodation.

Miss Mary Baldwin, Consultant in Nutrition with the Provincial Board of Health, resigned following her marriage, and her place was taken by Miss Yvonne Love, who served with the Nutrition Service of the R.C.A.F. Miss Love is a Home Economics graduate with special training in dietetics, and although only appointed in the fall of 1945 she has contributed to the expansion of the nutrition programme of the Provincial Board of Health. Mrs. E. M. Trenholm was appointed as Junior Nutritionist to assist Miss Baldwin and then Miss Love in an expansion of this programme.

Other employees have been added to the different Divisions in various capacities, and many of these have returned from the armed forces. However, there are still a number of vacancies to be filled, particularly in the technical fields of nursing, public health nursing, physicians, public health physicians, and other specialties, to bring the health services to even above normal strength.

One of the difficulties in attracting trained public health personnel to the Province, except in the field of public health nursing, is the low salaries paid by this Province in comparison with those of the Department of National Health,

city health departments, and some of the other Provinces, notably Ontario and Saskatchewan. A study of these public health salaries is under way, and it is hoped that this difficulty may be overcome by more equitable salary grades and ranges. If this difficulty can be met, it should be possible to attract to the Provincial Health Services a type of highly qualified and efficient public health personnel who can give an excellent quality of service and assist in more rapidly expanding the health programme to meet the needs of the people.

Another innovation during the year was the organization of senior staff meetings in the headquarters of the Provincial Board of Health at Victoria. Meetings are held weekly, and many of the complicated problems concerning administration are discussed, including programmes and developments in the Provincial and local health services.

During 1945 the war placed additional demands on the Provincial services, particularly in connection with the Japanese balloons and the return of large numbers of Canadian and British repatriates from the Pacific area after V-J Day. The Division of Tuberculosis Control made available their survey X-ray facilities to assist in taking chest X-rays of returning British and Canadian prisoners of war from Japan, to supplement the services of the armed forces. Provision of this help was just one of the many types of assistance provided to the armed forces whenever required. Laboratory facilities and a consultative service through the various specialized public health personnel of the Provincial Board of Health has always been available to the forces on request. The Division of Vital Statistics has assisted with records of births, deaths, and marriages in connection with the provision of dependents' allowances for members of the armed forces.

Plans are under way for a new Provincial Health building, to be located in Vancouver to house the three Divisions of the Provincial Board of Health and their services which are located in that area. This building will make provision for the much needed space for the Provincial laboratory, lack of which has held up the development of some programmes of public health, particularly premarital blood testing, and the Division of Venereal Disease Control, which must vacate its present quarters during July, 1946, to make way for the new nurses' home of the Vancouver General Hospital. It is hoped that this building can be started soon.

Such a building will prevent much overlapping between these now widely separated Divisions and make it possible to unify and centralize all services which are common to the three Divisions of Laboratories, Tuberculosis Control, and Venereal Disease Control. It will also make it possible to co-ordinate the local clinics provided by these Divisions, and then through centralization and unification prevent overlapping and provide a better and more easily administered out-patient clinic service to serve the people of the Greater Vancouver area. By the unification of the Divisions and their programme on a Provincial level, it will be possible to give a better co-ordinated service to the people, hospitals, physicians, and other groups.

A series of lighting-surveys have been conducted in the central offices of the Provincial Board of Health and the Division of Vital Statistics, as well as for some of the Provincial Social Assistance services in Vancouver, with the object

of demonstrating the need for adequate lighting at all times in these offices to save eye-strain.

DOMINION COUNCIL OF HEALTH.

The Provincial Health Officer attended the two semi-annual meetings of the Dominion Council of Health in Ottawa, which Council discusses the many complicated interprovincial and national problems of public health and advises all interested groups regarding these matters. In addition, this Council provides opportunities for voluntary standardization of procedures between the Provinces in Canada. The Council membership consists of the following: The Deputy Minister of the National Department of Health, chairman; the Deputy Minister or Senior Medical Health Officer of each Province; four lay representatives from labour, farm, and women's organizations; and one technical adviser from the School of Hygiene, University of Toronto. The expenses to this conference are paid by the Department of National Health.

DOMINION-PROVINCIAL CONFERENCE.

The Provincial Health Officer also attended the plenary Dominion-Provincial Conference held in August in Ottawa, and the senior staff of the Provincial Board of Health assisted in the preparation of extensive material concerning population and statistics in connection with health insurance and the other problems to be discussed at the conference.

There is an urgent need for more office space to house the central offices of the Provincial Board of Health in Victoria, which will be provided in the new building to be constructed as soon as materials are available.

THE COMMUNICABLE DISEASE REGULATIONS.

New communicable disease regulations were passed by the Provincial Board of Health (the Lieutenant-Governor in Council) and now are the official Communicable Disease Regulations for the Province of British Columbia. A great deal of study was necessary in preparing these regulations and they now provide control measures that are up to date, eliminating many of the irksome controls that existed in the past.

LOCAL HEALTH SERVICES.

Although no new Health Units were established during the year, considerable extension of existing Health Units took place to provide for full-time health service for more people in the Province. Considerable study was given to the method of financing Health Units and a revised plan was outlined, which will simplify this procedure considerably. This plan will make it possible for municipalities and other local areas to know the exact local costs of health services over a period of years, the only changes being brought about by an increase or decrease in population.

Four new public health nursing services have been established and other public health nursing services have been expanded to cover more territory.

Provision was made in the estimates for two full-time dentists to serve the rural parts of the Province of British Columbia, but unfortunately to date it has been impossible to obtain personnel to fill these positions. However, some prog-

ress has been made in expanding the dental programmes, and it is hoped that in the near future more children's dentistry will be made available to the various parts of the Province now without this service.

Dental programmes in the City of Vancouver, Burnaby, and the City of Victoria have continued to operate on an increasingly satisfactory basis.

The nutrition programme is steadily advancing and more practical information is being made available to the people through various local outlets, including local health services, home economists, and community voluntary groups.

DIVISION OF PUBLIC HEALTH ENGINEERING.

This Division receives many requests for advice or consultative service from all over the Province concerning water-supplies, milk and food control, model by-laws for milk, sewage-disposal, and many other phases of environmental sanitation important to the health of the people. It has been difficult for the Division with its small staff to meet these demands.

In addition to routine procedures and advice to local health services, the staff of the Division has been engaged in rewriting regulations for food and drinking establishments, cold-storage lockers, plumbing, septic tank and sanitary privies, lumber, mining, and other camps, and have in addition amassed a tremendous volume of modern information on these and other related subjects.

DIVISION OF TUBERCULOSIS CONTROL.

Tuberculosis death-rate continues its downward trend, and at the same time more persons suffering from tuberculosis are being found through the expansion of the survey and diagnostic clinics provided throughout the Province. A new tuberculosis clinic was opened in New Westminster during the year to serve that city and the Fraser Valley.

The demand for tuberculosis hospital beds has continued with the findings of new cases, and though a temporary seventy-bed tuberculosis ward was opened in conjunction with the Vancouver T.B. Unit, this is now full and more beds are planned in a new tuberculosis hospital to be erected in Greater Vancouver.

The bed facilities available in the Province have been even more effectively used, treating more persons with the existing facilities, thus bringing under control earlier the active cases of tuberculosis and preventing further the spread of the disease.

DIVISION OF LABORATORIES.

The Division of Laboratories again shows a substantial increase in the number of tests performed in the same cramped laboratory quarters, which condition, it is hoped, can soon be relieved by the construction of the new Health building in which the laboratory and the Provincial Health Services will be housed in more satisfactory and modern quarters.

The quality of the service performed by the Provincial laboratories is of a very high standard, as proved by tests conducted by the Department of National Health in conjunction with the other Provincial laboratories throughout Canada.

The work in the branch laboratories at Victoria and Nelson has also increased during the year.

DIVISION OF VITAL STATISTICS.

During the year the administration of the Division of Vital Statistics was reorganized on a modern basis to more effectively and efficiently carry out the many and increasing duties required of this Division. Some personnel have returned from the armed forces to their former positions, which should stabilize the staff more effectively in this Division in the future.

A National Council of Vital Statistics was organized with representatives from the nine Provinces and the Bureau of Statistics in Ottawa, through which Council a great deal of standardization and elimination of overlapping of procedures has already taken place. The Director of the Division attended the meeting of the Council.

In connection with Family Allowances, a tremendous load was placed on the Division of Vital Statistics to provide the Dominion with the necessary statistical data that would enable them to establish and maintain Family Allowances.

Besides the many necessary routine procedures conducted by the Division of Vital Statistics, as shown in their summary report, extensive studies were made on the health insurance proposals of the Federal Government and a large volume of statistical data was provided for the Dominion-Provincial Conference.

The method of microfilming vital records, introduced in the Province of British Columbia some three years ago, has been adopted throughout Canada and will simplify the submitting of copies of births and deaths to the Bureau of Vital Statistics in Ottawa.

DIVISION OF VENEREAL DISEASE CONTROL.

An administrative organization of this Division was also undertaken during the year, which enabled the staff to more efficiently meet the demands of the tremendous increase of cases found suffering from venereal disease and institute in co-operation with local health services a much more effective control programme. It will be noted from the figures published elsewhere in this report that more cases of venereal disease are being found and put under treatment than ever before in the Province. This is the direct result of the extensive programme developed over a period of years by the Division. Just as an increase of reported cases in the field of tuberculosis is an example of the efficiency of the programme, so also is an increase in reporting cases of venereal disease.

The co-operation of the medical profession in reporting venereal disease has assisted in increasing the numbers known and has developed a greater interest in the treatment of private patients.

The Division of Venereal Disease Control has suffered from a very extensive loss of personnel during the war years, and only toward the latter part of 1945 were some of the shortages made up. Major Monk, one of the Venereal Disease Control Officers from the armed forces, will join the staff of the Division early in 1946, and it is anticipated that another full-time Venereal Disease Control Officer will also be available.

More part-time clinical physicians are now assisting with treatment, which has made it possible to handle the increased number of cases reporting to the clinics for treatment.

The field staff of the Division, in co-operation with the local health services, has greatly extended case-finding and case-holding facilities, which again has assisted in bringing more cases under control and treatment. This expansion was aided by the substantial increase in funds allotted to venereal disease control for the year 1945–46.

Colonel Donald H. Williams, who joined the armed forces to undertake direction of joint-co-ordinated venereal disease control programme of the three armed forces and the National Department of Health, returned to the Province during the year to assume his duties as Director of Venereal Disease Control. With his duties as consultant for the Department of Veterans' Affairs in dermatology and his private practice, Dr. Williams found the directorship of the Division of Venereal Disease Control too heavy to continue in this position, and his resignation was accepted with regret, to take effect at the end of the year. Major W. C. Mooney, who was seconded from the armed forces to take charge of the Division of Venereal Disease Control during the absence of Colonel Williams, was again promoted to the position of Acting-Director of the Division.

CANCER-CONTROL.

The Provincial Health Services have taken an active part and interest in the promotion and development of services in the Province in connection with the important subject of cancer-control. A special item of $25,000 made it possible to purchase a deep X-ray therapy unit and loan this to the British Columbia Cancer Institute, a philanthropic organization for the treatment of cancer cases. In addition, the Provincial Health Services met the deficit of the cancer clinic or institute.

A special budget item of $25,000 has been placed in the 1946–47 estimates to aid in the further expansion of cancer-control. Close co-operation is maintained with the Cancer Department of the British Columbia Medical Association and the Provincial Branch of the Canadian Cancer Society. The services of the Provincial Hospital Inspector have been extensively utilized by the British Columbia Cancer Institute in connection with a plan of reorganization to provide more service with the facilities available.

CO-OPERATION WITH OTHER DEPARTMENTS OF GOVERNMENT.

Co-operation received from other Provincial services and Departments during the year has been very helpful in meeting many of the problems facing the Provincial Health Services. Particular mention must be made of the help provided by the Provincial Police in dealing with emergencies throughout the rural and isolated parts of the Province and in the important field of venereal disease control. The Department of Education, the Department of Agriculture, the Department of Public Works, the Lands Department, and others have all assisted in the work of the Provincial Health Services. The Social Assistance Branch of the Provincial Secretary's Department in their co-operation have made it possible to satisfactorily deal with many problems.

Excellent co-operation has been received from the teachers throughout the Province, local health services, School Boards and Councils, and the medical and dental, legal, veterinarian, and pharmaceutical professions.

Attention is directed to the loyalty, co-operation, and outstanding service provided by the technical and other employees of the Provincial Board of Health and the public health workers throughout the Province. Without their loyalty and outstanding contribution to the welfare of the people, it would have been impossible to have met the health demands which developed during the war period. If the same high calibre of trained public health personnel can be obtained, together with the small amount of funds necessary for expansion, the future of preventive services for the people of the Province is assured.

THE HEALTH OF THE PEOPLE OF BRITISH COLUMBIA.

The health of the people of British Columbia is reflected only to a certain extent in the mortality figures for 1945, and care should be exercised in studying these if correct impressions are to be gained. The preliminary death-rate in 1945 was 10.4, which was a decrease of 0.5 death per 1,000 population over the previous year. There is again a slight increase in the actual number of deaths at ages 60 and over, 6,034 in all. Over one-half (61 per cent.) of the total deaths in the Province were in this age-group; 19 per cent. were of persons between the ages of 40 and 59; 7 per cent. between the ages of 20 and 39; and 13 per cent. under 20 years of age.

Maternal and infant mortality rates have both shown increases during the year under review. There were 810 infant deaths (children dying under 1 year of age) in British Columbia in 1945. This figure represents 63 per cent. of deaths under 20 years of age. The preliminary infant mortality figure was 40.03, which is an increase of 2.4 per 1,000 live births over the figure for the previous year. There were 53 maternal deaths in 1945, giving a provisional rate of 2.6 per 1,000 live births, an increase over the 1944 rate, which was 2.4.

Of primary importance in a study of this nature is the necessity to ascertain the leading causes of death. Causes of death naturally fall into certain broad groups. As was done in last year's report, "Diseases of the Heart" and "Diseases of the Arteries" have been grouped together to form one cause of death.

A study of the leading causes of death for all ages reveals that diseases of the heart and arteries were responsible for more deaths than any other condition, accounting for 3,201 in all. Cancer was the second leading cause—1,399 persons died of this disease. Third cause was intracranial lesions of vascular origin, including cerebral hæmorrhage, embolism, thrombosis, and paralysis, which accounted for 770 deaths. Accidents were the fourth cause of death, taking 761 lives. This was an increase of 105 deaths due to this cause over the number in 1944. Especially notable is the large increase in the number of deaths due to conflagration and accidental burns; deaths due to the former were almost doubled and there were three times as many deaths due to the latter in 1945 as compared with the previous year. There also were sizable increases in deaths in water transport accidents and deaths due to mechanical suffocation.

Tuberculosis ranked fifth as a cause of death—518 persons died in the Province from tuberculosis in 1945. This gives a provisional tuberculosis mortality rate of 54.6 per 100,000 population, a decline of 35 from the previous year. If Indian deaths are excluded, the provisional tuberculosis rate becomes 38.5.

Pneumonia ranked sixth as a cause of death, followed closely by nephritis. Diseases of early infancy was the eighth cause, while diabetes was ninth and suicide tenth.

There was a very marked decrease in deaths from influenza in 1945. In the year under review there were only 48 deaths from this cause as compared with 121 in 1944.

To gain a full appreciation of the mortality picture of the Province of British Columbia, the effect of Indian deaths on certain specified diseases must be considered. In general, Indian mortality exerts little influence on the ranking of the leading causes of death in the age-groups 30 years and over. It is under 30 years of age that the most significant differences occur; 67 per cent. of all Indian deaths were under 30 years of age; 31 per cent. were under 1 year of age; and 43 per cent. were under 5 years of age.

Twenty-seven per cent. of all Indian deaths were due to tuberculosis; over three-quarters of these deaths were among Indians under 30 years of age. Tuberculosis mortality figures and those of other diseases such as pneumonia and influenza were affected very unfavourably by Indian mortality. Indians are the wards of the Federal Government and so do not constitute a direct responsibility of the Provincial Board of Health. However, they can not be ignored in a public health programme as long as they present a threat to the health of the rest of the people.

If a strictly accurate picture of the responsibility of the Provincial Board of Health is to be estimated, Indian deaths must be excluded from a study of this nature. Therefore, the following statistics are exclusive of Indians. The figures must be analysed with an eye to both the cause thereof and the means of prevention to be of assistance to the Provincial Board of Health in its programme. A study of the chief causes of death of infants under 1 year of age reveals that prematurity ranked first, accounting for over one-third of the deaths in this age-group. Undoubtedly, improved prenatal and postnatal care could reduce this figure considerably. The second cause of death among infants was found to be congenital malformations. This cause does not respond to treatment as readily as many others, but improved prenatal care can exert favourable influences. The third cause of death among infants was injury at birth and fourth was pneumonia.

Among pre-school children accidents were the leading causes of death, accounting for 36 per cent. of the deaths between the ages of 1 to 4 years. Most of these deaths could have been prevented if more care had been taken by the parents. The second cause of death in this age-group was tuberculosis and pneumonia third.

Between the ages of 10 and 39 years the leading cause of death was accidental death. Many of these deaths are preventable, as are those caused by tuberculosis, which ranked second. The Division of Tuberculosis Control of the Provincial Board of Health has greatly increased its case-finding, which, with continued application, should ultimately, because of early diagnosis and treatment, reduce greatly the number of deaths due to tuberculosis.

The chief cause of death between the ages of 40 and 59 years was disease of the heart and arteries. The second leading cause of death in this age-group was cancer. It is unfortunate that these degenerative diseases should take such

a heavy toll in these most productive years. Deaths from these diseases can be prevented or at least postponed until later years if diagnosed and cared for at an early stage. Accidental deaths ranked third in this middle-age group.

Diseases of the heart and arteries ranked first in the ages over 60. The second cause of death in this age-group was cancer, intracranial lesions was third and nephritis fourth.

Despite a very considerable decrease in the number of deaths from influenza, meningitis, and whooping-cough, there was an increase in deaths from measles, erysipelas, and paratyphoid fever.

The very existence of deaths from communicable diseases is a constant reminder that the methods designed to control and eliminate them must be continued without relaxation. The public health worker and private physician alike must be continually on the alert to discover the presence of communicable diseases and institute control measures. For further information regarding communicable diseases reference should be made to the Epidemiological Report of the Bureau of Local Health Services on page 22, where an analysis is made of increases and decreases in comparison with previous years.

The field of public health is continually expanding. To-day it is concerned not only with measures to prevent illness and premature death, but also with those designed to prevent premature crippling and invalidism. It must also plan means of lengthening the life of the people. Its attention must be concentrated on reducing the number of deaths caused by degenerative diseases in people at the time of their maximum economic use to society. Now, more than ever, it is doubly important that emphasis be placed on this aspect of public health. On account of the limitations of the statistical data at hand at the moment pertaining to British Columbia, little or no mention has been made in this article of the injuries which, all too frequently, disable; or of the many diseases which although not in themselves serious enough to kill do incapacitate, temporarily at least. Sufficient is now known about the common cold, for example, to place it as one of the most important causes of loss of time in industry. To mitigate such minor diseases much can be done by the general populace in practising good health habits, particularly in regard to having an adequate and varied diet, proper rest, exercise and relaxation. These are the fundamentals which must oft be reiterated, not only in war-time but as the basis for building a sound post-war health programme.

The subject of this article tends to be misleading as the main emphasis is on the mortality picture in the Province rather than on the morbidity or sickness aspects of the health of the people. It is impossible to give an adequate analysis of the current health conditions of the people without statistics of the incidence of many of the common illnesses, especially those of the non-fatal type. It will only be after health insurance has been implemented that a true picture of the morbidity situation can be obtained.

BUREAU OF LOCAL HEALTH SERVICES.

The writing of this report brings to a close another year of work in local health service in British Columbia; 1945 has been a year of varied activity in this particular field. Numerous health problems of one type and another have

continued to occur for a number of reasons, not the least of which has been the continuation of activities directly related to the war, for the greater part of the year. Again, it has meant the making of adjustments and readjustments from time to time with regard to policies and personnel in order that as efficient and as effective a health programme as possible might be carried on for the protection of the people in British Columbia. In spite of all difficulties, it is generally felt that the standard of work has not been lowered, but on the contrary has been well maintained and in certain instances advances made which can be definitely considered as progress achieved. The highlights of the various phases of the work will be dealt with under the headings which follow:—

PUBLIC HEALTH NURSING.

The report of the Director of Public Health Nursing is appended herewith and gives a broad picture of the activities in this phase of public health work in the Province. This report deals for the most part with the area outside of the Greater Vancouver and Greater Victoria areas. It also outlines the experience during 1945 *re* the changes in personnel, new policies established during the year, revision of records, and difficulties in the matter of providing transportation in rural areas.

It is a matter of satisfaction to note that during 1945 four new public health nursing districts were established in the Province. These were in the Tsolum-Campbell River area, the Municipalities of Surrey and Langley, and the City and Municipality of Salmon Arm. The public health nursing service in the latter city and municipality was an extension of the North Okanagan Health Unit. A number of established public health nursing services were expanded to cover more territory as neighbouring communities realized the value of a public health nursing service. Further details about this are given in the appended report of the Director of Public Health Nursing.

There still exists an acute shortage of Public Health Nurses, which makes it impossible at the present time to open up a number of additional new areas where the communities are both interested and anxious to have such a service, and are willing and ready to carry the cost of finance when qualified Public Health Nurses do become available. It is hoped that the markedly increased enrolment in the public health nursing course at the University will help somewhat in relieving the shortage during 1946. During 1945 it was necessary, for example, because of the shortage of Public Health Nurses to close the Williams Lake Public Health Nursing Service for a period of time, and in other areas to approve the appointment of nurses untrained in public health as a temporary expediency. The Public Health Nurses in the field at the present time are worthy of the highest commendation for the willingness and cheerfulness with which they have carried on during the past year in spite of heavy burdens and inconveniences in many cases.

As was mentioned in last year's report, it was necessary during 1944 to ask one of the Public Health Nurses to assume the position of Supervisor in the Peace River Health Unit and as such also act in the capacity of Acting-Director of the Unit. This situation has had to be continued during 1945 because of the continued shortage of public health physicians.

The News Letter from the Provincial Board of Health to the Public Health Nurses throughout the Province has been forwarded monthly from the central office and has continued to serve as a valuable medium of instruction and education. Unfortunately, it has not been used to its fullest extent as a medium for exchange of information covering the experience, ideas, and suggestions of the Public Health Nurses located in various parts of the Province. It is anticipated that some revision of policy concerning this publication will take place during the coming year, and further details concerning this expected change are given under the section of Public Health Education.

The acceptance by local School Boards and Public Health Nursing Committees of the recommended salary schedule for Public Health Nurses has been gratifying to this Department. While all the Public Health Nurses have not yet had their salaries rearranged in line with the new schedule, nevertheless this is taking place as rapidly as possible, and in general one of the much argued and much debated problems of the past year is rapidly being solved. Efforts are still continuing to arrange a plan for superannuation for public health personnel in the field, and at the present time the prospects do look somewhat brighter than in the past.

Again, the annual Institute for Public Health Workers was held just prior to the Easter holiday, and followed in a general way the programme of previous years, with a considerable amount of time being allowed for group discussions on topics of current interest. Reports of these discussions were read to the whole assembly by the chairman of the discussion group the following day so that all might benefit from the various points brought out by the particular discussion groups. Again, the majority of the talks were given by the technical staff of the Provincial Board of Health dealing with matters of practical interest and concern to the field-worker.

Two or three innovations of interest were tried out this year. For example, the statistical clerks of Health Units were brought to Victoria for the meetings, and it is felt that they gleaned something of value from listening to the various discussions covering the gamut of public health activities from policy on the one hand to problems on the other. One afternoon was set aside during which Health Unit Directors met with the Provincial Health Officer to discuss matters of policy and administration, the Public Health Nurses met as a group to discuss matters of interest and concern to them, the Sanitarians met with the Director of Public Health Engineering for discussion of problems incident to their field, and the statistical clerks met with the Director of Vital Statistics for a discussion on charts and Health Unit statistics districts.

Further, for part of another afternoon all Health Unit personnel met with a panel of senior officials from the central office of the Provincial Board of Health to discuss various phases of Health Unit administration and correlation of procedure as between the local health services and the Provincial Board of Health. At the same time the Public Health Nurses met with the Director of Public Health Nursing to discuss similar subjects, with particular reference to the field of public health nursing. It was agreed by all that the four days per year spent this way were very worth while and that much benefit by way of stimulation and new ideas was obtained.

It is the hope of the Provincial Board of Health that it may be possible some year to try out an entirely different type of annual Institute, whereby an outside public health authority may be invited to conduct the whole programme, covering some large subdivision of public health work. This would be carried on by means of lectures, demonstrations, and group discussions. If it is possible to secure one of the outstanding authorities who have already been contacted in the United States, it may be possible to execute such a policy for the Institute in 1946.

SCHOOL MEDICAL SERVICES.

It was mentioned in last year's report that by the end of June, 1945, all school children will have been examined since the new policy *re* school medical examination was first instituted. Under this policy only children in Grades I., IV., VII., and X. are examined as a routine measure and, in addition, such other children from other grades as are referred by the teachers or the Public Health Nurses to the School Medical Inspector. This procedure was made necessary, as outlined previously, because of the continued shortage of physicians and also because of the heavy burden of extra work which all those in civilian practice have been carrying during the war years. These conditions still hold, and sufficient physicians have not yet been released from the armed forces to alter materially the picture as far as the rural areas are concerned. It was therefore deemed advisable to continue the same policy in effect during the school-year 1945–46.

The new report forms mentioned in previous reports, and in which the pupils of the various grades are categorized in so far as their health status is concerned, have continued to prove practical, and as experience has increased with the use of these forms, the completeness of recorded information has also improved. Analysis of the figures from these reports will be given in the Medical Inspection of Schools Report for the Year 1944–45.

The policy of endeavouring to classify school pupils by physical status and the new school report form just mentioned have aroused considerable interest in numerous other centres of the North American Continent. A number of communications have been received from such centres, in which it has been stated that the policy in effect in British Columbia to-day represents definitely a forward step.

Time must also be taken at this point to state a word of appreciation to the School Health Inspectors for the interest which they have shown and their co-operation during the year just ended. The time that these men have given to school health work is much appreciated by this Department. Their willingness to make special trips to schools and also to investigate on request reports on outbreaks of communicable disease in such schools has been of very material assistance.

One of the highlights of 1945 in this particular field was the introduction of a new form covering environmental sanitation of schools. The Division of Public Health Engineering has worked on this form for some time and it represents a very considerable departure from the simple type of report form previously in use. As the School Health Inspectors become familiar with it, they will realize it does not take a great deal of time to complete and that it does

present a much more complete picture of the school environmental sanitation than was possible in the past.

NOTIFIABLE DISEASES.

A table on pages 111–114 shows the number of reported cases of notifiable disease. The total number reported—namely, 27,588—represents a slight increase from that reported during the previous year. In 1944 the figures showed a total of 25,076 cases reported. The year 1945 has thus continued to be a favourable one in general for British Columbia in so far as communicable disease is concerned. The movement of population, together with overcrowding in all the large centres throughout the Province, has not materially changed during the year, but in spite of this there has been no widespread outbreak of any particular disease other than chicken-pox and measles. During 1944 there were slightly more than 5,000 cases of chicken-pox reported and during 1945 practically the same number of cases was reported. These were not concentrated in any one centre of the Province but were scattered fairly well through the whole Provincial territory.

Measles frequently runs in cycles of four to five years. This was fairly generally true in British Columbia until the war years; 1937 was a peak year with 30,923 cases and four years later in 1941 there were more than 15,000 cases of measles reported. There was some decline in 1942 but again in 1943 more than 8,000 cases were reported. There was a marked reduction in 1944 to just less than 1,500 cases but again in 1945 a very marked rise to slightly more than 9,000 cases were reported during the year. Again, these cases were reported from no few centres in particular but from every corner and part of the Province during the year. It is interesting to note that measles and chicken-pox together make up close to 50 per cent. of the notifiable disease reported during the year.

Cancer showed an increase of reported cases from 1,220 in 1944 to 1,979 for the year just ended. This figure by itself, as has been pointed out in previous reports, does not have a great deal of significance since the incidence of cancer in the general population is not accurately known. The difference between these two years might be accounted for to a degree by a greater number of people taking advantage of such diagnostic services as are available to them. Cerebrospinal meningitis reached a peak of 138 cases in 1941 and since that time has shown an annual decrease. During 1944 there were 47 cases reported and during 1945 a still further decrease to 25 cases has occurred. Dysentery (all forms) showed a very considerable rise from 79 cases last year to 207 cases during 1945. A certain amount of this increase can be credited to the policy in some of the larger hospitals of doing routine stool cultures on all patients suffering from diarrhœa.

No cases of botulism were reported during the year.

Paratyphoid fever showed a considerable increase from 11 cases for the previous year to 28 cases for the year just ended. It is of interest to note that 25 of the cases were reported from Quesnel and district as occurring during one outbreak. Unfortunately, it was not possible to accurately locate the source of this infection. This year infections of the *Salmonella* type are not included under the heading of Paratyphoid Fever. In fact, all types of *Salmonella* infec-

tion are listed separately under the heading of Salmonellosis. Of this type of infection there were 46 cases reported during the year. Of these, 39 were reported from the Greater Vancouver area. This does not mean that there is necessarily more of this type of infection in Vancouver than elsewhere, but a considerable amount of study has been done by the health authorities in the Greater Vancouver area in co-operation with the Division of Laboratories of the Provincial Board of Health. This has resulted in the uncovering of a number of cases of this disease and also a number of carriers who otherwise would have been unidentified.

Epidemic hepatitis has again shown an increase, a total of 390 cases being reported for the year. In the past, no doubt a number of cases of this disease occurred, but it is only within the last year or two that they have been reported by Medical Health Officers. There is a definite increase in interest in this disease, as evidenced by the number of communications which have been received from physicians during the year. Mumps showed a 50-per-cent. decrease, there being only 1,050 cases reported during the year.

Poliomyelitis (infantile paralysis) showed a very considerable increase from 18 cases in 1944 to a total of 51 cases during the current year. Again, this Province can be considered fortunate in the relatively small number of cases that occurred in view of the fact that there was a widespread epidemic of this disease in the State of Washington during the year. Rubella (German measles) also showed a considerable reduction, there being only 737 cases reported during the year. Scarlet fever was unusually low, there being only 1,009 cases reported during 1945. Unfortunately, there was an increase in the number of cases of tetanus reported, there having been only one case during 1944, but 5 cases during the year just ended.

Septic sore throat increased from 219 cases previously to 365 cases during 1945. It is interesting to note that 103 of these cases were reported from the City of Salmon Arm, where a widespread outbreak occurred during the spring of the year and lasted over two months. The origin of this outbreak was finally traced to one dairy supplying raw milk and at which the people engaged in the handling of milk had had a series of septic sore throat infections. This epidemic again demonstrates the potential danger of raw milk and adds another chapter of evidence in favour of the use of safe milk, which means only powdered, evaporated, or pasteurized milk.

Toward the end of the year 90 cases of septic sore throat were also reported from Powell River and the evidence to date also makes this appear to be a milk-borne epidemic of a rather severe type. Septic sore throat is usually due to a streptococcus type of infection and this organism together with its toxin may, in the human body, give rise to various symptoms, among which are the septic sore throat syndrome, a scarlet fever type of rash, rheumatic affection of the joints, and rheumatic disease of the heart. In this particular epidemic at Powell River all of these results of streptococcic infection were manifest. It is unfortunate indeed that it requires epidemics of this type with accompanying suffering and crippling to have communities realize the potential health menace of raw milk.

Typhoid fever showed a reduction in the number of reported cases from 34 for the previous year to 5 for the year 1945. The cases that did occur were

not lumped in any one area of the Province but were scattered throughout the various centres of population.

As was forecast in last year's report, the new Regulations for the Control of Communicable Diseases were brought into effect early in 1945. They have so far proved to be quite practical and there has been no major difficulty in their application. There are minor changes that will have to be made in the wording of certain sections in order to overcome a certain ambiguity, but in general they would appear to be serving their purpose quite well.

Diphtheria unfortunately showed an increase from 17 cases previously to 36 for 1945. The fact that any cases of this disease should occur is unfortunate when to-day it is a preventable disease. The discovery late in the year of a number of diphtheria carriers in Vancouver only serves to strengthen the argument that immunization against this disease is highly important in order to protect the infant and young child. No less important is the reimmunization of pre-school children in order to make sure that their immunity is maintained at the highest protection level possible.

FULL-TIME HEALTH SERVICES.

It has usually been possible in this section of the report to make reference to the establishment of a new Health Unit as having been opened up during the year. However, 1945 saw no such development in local health services in British Columbia. This was not due to any lack of interest on the part of a number of areas in the Province but rather directly due to the fact that nowhere in Canada was it possible to secure the services of trained and qualified public health physicians to assume positions as Directors of Health Units. In spite of this difficulty, considerable developmental work has been done and at least two areas and possibly three in the Province are ready to support a full-time local health service in the form of a Health Unit when qualified personnel become available. It is hoped that such personnel will become available during 1946 and that the coming year will see additional Health Units developed in British Columbia. The East Kootenay area, including Cranbrook, Fernie, Kimberley, Creston, and the surrounding territory, has been interested for a considerable period of time in the establishment of a Health Unit for that section of the Province. It is likely that this is where the first new Unit will be opened up. There is also considerable interest in Health Unit service in the Chilliwack-Abbotsford area, as well as the Prince George district.

The North Okanagan Health Unit, which was commenced in October, 1944, and which was mentioned in last year's report, has made satisfactory progress in establishing a generalized public health programme in the City of Vernon and some of the surrounding territory. Unfortunately, it has not yet been possible to bring under the administration of this Unit all the territory originally planned because of a lack of appreciation of the value of Health Unit services by certain communities in the area concerned. However, progress is being made and it is hoped that during 1946 the entire territory served by this Health Unit will be considerably extended. Following the outbreak of septic sore throat in the City of Salmon Arm, there was an increased interest in full-time service, and the result was that both the City and Municipality of Salmon Arm in the fall of this year became a part of the territory served by the North

Okanagan Health Unit. There is considerable interest in this type of local health service in the City of Armstrong and the Municipality of Spallumcheen which it is hoped will be crystallized into action before long. It is unfortunate that in spite of the abundant evidence in the past it still requires epidemics to outline to communities the cheap cost of prevention through the establishment and maintenance of an effective local health service.

Unfortunately, during the summer of 1945 Dr. R. G. Knipe saw fit to relinquish the position of Director of the Prince Rupert Health Unit to return to the practice of therapeutic medicine. This left the Prince Rupert Health Unit without a Director, a vacancy which it has not yet been possible to fill because of the shortage of public health physicians. Arrangements were made with one of the physicians in the city to carry on as Medical Health Officer and Acting-Director of the Health Unit on a part-time basis. The kind co-operation of Dr. W. S. Kergin in this regard is much appreciated.

As was mentioned earlier in this report, it has been necessary to continue temporary arrangements with regard to the Peace River Health Unit whereby Mrs. Pauline Yaholnitsky, Public Health Nurse, has acted as Supervisor of the Peace River Health Unit, and as such to carry on the duties of Acting-Director. It is hoped that it will not be necessary to continue this arrangement very long during 1946, with the hope that public health physicians may become available early in the new year. Mrs. Yaholnitsky is to be congratulated for the splendid way in which she has carried on the supervision of the activities of the staff of this Health Unit in spite of numerous difficulties and problems which have arisen from time to time. It was possible during the year to increase the public health nursing staff by one nurse, and while this relieves the situation somewhat there is still urgent need for another Public Health Nurse on the staff of this Health Unit. To the personnel of this Unit, and particularly the Sanitarian, should go full credit for the marked improvement in restaurant sanitation which has taken place during recent years in the main centres of population in the Peace River District of the Province.

The Okanagan Valley Health Unit was expanded somewhat by the addition to the area covered of Allen Grove in the south and Oyama in the north. This Unit has continued its usual high standard of generalized public health programme, with considerable emphasis on immunization during the year just past. A further step was taken in consolidating administration within the Health Unit area toward the end of the year when the Penticton School Board agreed to have the Public Health Nurse, formerly employed by them, to be employed by the Union Board of Health. This leaves only one Public Health Nurse in this Health Unit area not being directly employed by the Union Board of Health. When this occurs all local health services will then be under the direct supervision of the Health Unit Director. During the year the Kelowna School Board agreed to have immunization work in the school carried on by the Health Unit Director. The shortage of Public Health Nurses has made it extremely difficult for this Health Unit to provide as effective a service in the Kelowna rural area as might be desired because of the heavy burden being carried in that area by the one Public Health Nurse. Another Public Health Nurse is urgently needed in this particular district.

The Central Vancouver Island Health Unit staff have continued their investigation into what were formerly accepted as routine procedures, with a view to determining their time factor versus their effectiveness. This group of public health personnel have also been responsible for putting together a pre-school programme, together with three booklets which are outstanding in their simplicity but thoroughly sound in content and method of application. The staff of this Health Unit are to be congratulated on their forward and progressive views with regard to Health Unit policies and practices.

The Saanich Health Unit, serving the Municipality of Saanich, has carried on an effective generalized public health programme, and various members of the staff have assisted the central office of the Provincial Board of Health from time to time in the revision of various record forms in use throughout the Province.

In the City of Victoria it is interesting to note that during the year amalgamation was brought about between the school health services and those of the city health department. It is anticipated that in 1946 Dr. J. L. Murray Anderson will assume the directorship of this joint service. It is hoped that the Municipality of Esquimalt will join with the City of Victoria in making the first step toward the formation of the Greater Victoria Metropolitan Health Area.

For several years the question of budgets for Health Units has been a problem. The budgets of many of the earlier Health Units were not arranged on any set plan but rather on whatever agreement could be arrived at with the local area concerned. This has meant that there has been no uniform plan as between Health Units. In addition, local costs both as between Health Units and also as between local areas in any one Health Unit have varied considerably. In an endeavour to equalize local costs to a certain extent in proportion to responsibility the Provincial Board of Health has contributed 25 per cent. of the cost in organized territory and 75 per cent. in unorganized territory. However, this has not been entirely satisfactory. Furthermore, because the Health Unit personnel are employed locally it has not been possible to date for any superannuation plan to be made applicable to them and, further, it has also made more difficult the transfer of personnel from one area of the Province to another when this has been desirable or necessary. It would appear logical to state that the time has arrived for a complete revision of the method of Health Unit financing whereby a fixed flat rate would be the basis for local contribution with a variation in rates between organized and unorganized territory. It would also seem desirable to have Health Unit personnel employed by the Provincial Board of Health if at all possible. This would make for greater facility in the transfer of staff and also, it is hoped, would lead to some arrangement whereby superannuation could be made available to these public health workers.

During the year a request was made by the Connaught Laboratories, of Toronto, as to whether it might be possible to utilize in Health Unit areas a new type of immunization material against scarlet fever. It was possible to arrange for this work to be carried out in the Okanagan Valley Health Unit, the North Okanagan Health Unit, and the Central Vancouver Island Health Unit. This work is rapidly nearing completion and the results would tend to indicate that the new product is superior to the old in so far as relative immunity is concerned, and also has the further advantage that only three doses are required instead of

the usual five. The results will be available early in 1946 and will be more fully reported on in next year's report.

Again, the many part-time Medical Health Officers throughout the Province are to be congratulated for their splendid co-operation and help during the past year. The amount of time and effort which some give to public health work and the health problems of their areas has been much appreciated. It has been possible during the year just ended to have senior officials from the central office of the Provincial Board of Health visit local areas a little more frequently than in the past, and this has been the means of clarifying a number of problems for Medical Health Officers in the field. Further, it has also been possible to bring more assistance this year to a number of Medical Health Officers where outbreaks of communicable disease have occurred and where the resident physician has not had time to make proper epidemiological investigation.

PUBLIC HEALTH EDUCATION.

This year has been a very active one in the field of public health education, not only for the various Divisions but also for the central office of the Provincial Board of Health. All senior officials on numerous occasions have met and held sessions with community groups, including Municipal Councils and School Boards, Parent-Teacher Associations, Boards of Trade, and other official and voluntary groups.

It was mentioned in last year's report that it had been possible to secure a fellowship from the W. K. Kellogg Foundation for postgraduate training in public health. Miss K. McNevin will return to British Columbia at the end of the year and will commence her work as Public Health Educator on the staff of the Provincial Board of Health in January of the new year. It was originally planned that Miss McNevin would assume the position of Public Health Educator in one of the Health Units, but because of the volume of work to be done in this particular field in the central office it has been necessary to change the original plan and consider a Public Health Educator for Health Units as a later development.

Miss McNevin will have among other duties the critical appraisal and revision of all public health literature distributed by the Provincial Board of Health, as well as assembling of the monthly bulletin and the News Letter to the Public Health Nurses. Plans at the present time call for the monthly bulletin to be changed into a medium for the distribution of current, popular health material to the public and the former News Letter to become a technical bulletin for distribution to all field public health personnel. It is anticipated that this will overcome a number of deficiencies which are evident at present with reference to these two publications. The Public Health Educator will also supervise the central library of the Provincial Board of Health and will be available in a consultant capacity to Health Units, with particular reference to not only their library but an effective public health education programme.

The usual series of lectures to the students at the Provincial Normal School in Victoria was given in the spring of 1945. They were given by senior technical officials of the Provincial Board of Health and, while modified somewhat from previous years, were given with a view to acquainting the students with

public health administration in British Columbia both on the Provincial and local level. An endeavour was made to give as practical information as possible so that the prospective teacher could see how she might best assist in making the local health programme as effective as possible in her community and in her own school in particular. All of the senior technical officials of the Provincial Board of Health have continued to act as voluntary lecturers to the public health nursing students at the University. In addition, lectures were also given to the social service students at the University.

The Consultant in Nutrition has continued her extensive and energetic programme on health education in the field of nutrition. An attempt was made this year to work more closely with Health Unit personnel in order to have people in areas served by Health Units come to look upon their local health service as the source of authentic information on all phases of public health work. The addition of two Nutritionists to the staff to assist the Consultant has helped materially in expanding this phase of the work. The appended report by Miss Baldwin gives more detail of the variety of work carried on in this field of public health.

A considerable number of letters to expectant mothers has again been sent out during the year. This has been made possible, as before, through the co-operation of the Canadian Welfare Council. During 1945 more than 3,600 prenatal letters were sent to 400 expectant mothers who requested this service. Postnatal letters covering the first year of the baby's life were sent to 2,516 mothers who requested them, a total of almost 30,200 postnatal letters being forwarded. The series of letters covering the first year of the baby's life is also made possible through the co-operation of the Canadian Welfare Council. However, with the kind permission of this Council the Provincial Board of Health has somewhat revised and re-edited this series, and it is expected that in 1946 the Provincial Board of Health will publish the new series of letters covering the child's first year. Requests for letters covering the pre-school age totalled 570, while those for the school age totalled 239. It must be pointed out that the above figures relate only to the area outside of the Greater Vancouver Metropolitan Health Area as requests from people of this area are handled locally.

It is of interest to note that a Film Liaison Committee has been set up as between the National Film Board and the Department of National Health and Welfare. This Committee has previewed a very extensive list of films and provided the Provincial Health Departments of Canada with copies of the lists of films previewed, together with comments on the contents and value of the films. The best of these films have been purchased and from them a preview library is being built up in Ottawa. Copies of these films are made available on request to the Provincial Health Departments for preview with a view to determining whether the Department wishes to purchase such films or recommend them for purchase to local health services. This is a very splendid development and of considerable assistance to the Provincial Health Departments in helping them to keep in touch with what films become available from time to time and through what sources they are available.

The Provincial Board of Health has already screened a number of the recommended films and is making arrangements for screening more of them

early in the new year. A few new films have already been added to the film library and it is anticipated that more will be added during the coming year. The films are available on request to the local health services throughout the Province for short periods to assist them in their public health educational programmes. A close working relationship is also being established with the regional representative of the National Film Board in British Columbia with a view to determining how best the rural and industrial film circuits might be utilized for public health education purposes.

PREVENTIVE DENTISTRY.

The situation with regard to preventive dentistry remains identical with that of last year. Outside of the Cities of Vancouver and Victoria, to the best of our knowledge there is only one local dental clinic operating on a more or less permanent basis. In many of the rural areas there are still no dentists available, while in others the dentists have been so busy as not to be able to find time for children's preventive clinics. In one or two instances, dentists particularly interested in this phase of the work have given some of their time so that a dental clinic for pre-school children and the lower grades of school children might be carried on for a short period. Their help and co-operation in this regard is much appreciated.

With the release of dentists from the armed forces, it is hoped that it may be possible to interest a number of young men in public health preventive dentistry so that this type of service may be brought to much of the rural territory throughout British Columbia. The majority of communities realize, more than ever before, the need for some form of preventive and periodic dental care. One sees on every hand the great need for a very drastically increased number of dentists in order to bring this essential service to the people in the rural areas and to assist in overcoming the terrific number of untreated dental caries which has accumulated during the war years as a result of the acute shortage of dentists. A logical development would appear to be a public health dentist as a staff member of each Health Unit or serving two Health Units, devoting his entire time and attention to the pre-school children and the lower grades of school children in the area served by the Health Units. It is hoped that such a development may not be too far distant in order to make real progress in restoring and adequately maintaining the dental health of the future citizens of this Province.

REPORT OF THE DIRECTOR OF PUBLIC HEALTH NURSING.

Miss Dorothy E. Tate, R.N., B.A.Sc., M.A.

Among the notable signs of progress during 1945 have been an increase in the number of districts receiving public health service, initiation of new emphasis on programmes, and advancement in educational work. Events of the year have kept every one exceedingly busy adjusting to the demands made of them professionally and personally. Now, at the end of the year, the opportunity is taken to review the work of the year and foretell activities for the coming year.

It has been of some significance that until recently 80 per cent. of the people of British Columbia have been in receipt of public health nursing service. The service has expanded again this year to include three of the larger rural municipalities. Another municipality wishing to have Health Unit services was sufficiently large to require the full-time services of a Public Health Nurse. Two districts in which it was necessary to temporarily suspend public health nursing service last year due to lack of staff have again been reopened as additional Public Health Nurses were obtained this year. This brings the number of public health nursing districts to forty-five, which means that 85 per cent. of the population of British Columbia is now receiving a recognized type of public health nursing service. A public health nursing district may or may not be confined to one city or larger centre; it may be a municipality or it may serve a section of unorganized territory, or any combination of these three. The determination of district boundaries depends upon a number of factors, such as the size of the population, its distribution, roads, facilities, and conditions for travelling. It is interesting to note that all new services are instigated by the people of the communities. Activities of the Public Health Nurse demonstrate the value of public health service and thus provide opportunities to explain the increased value of Health Units. As a result, the interest in the more complete service is stimulated and Health Unit organization follows. A centre having public health service passes on its feeling of satisfaction for the type of service directly to adjoining areas and also indirectly by movement of its members to communities where there is no public health service. On request, assistance is given by the Department of Health regarding methods of interesting citizens in obtaining public health service by outlining the scope of the service, by suggesting an economic budget, equipment necessary, and means of obtaining it, and by recommending a satisfactory local administrative group. Policies regarding employment of staff and those governing working-hours, holidays, educational standards, in-service education, and salaries are submitted for consideration to the communities. Much of the information is given through correspondence but is followed up by a personal visit of one or more senior members of the Department to the district. This policy is adopted because of the desire of the Department to understand the local conditions governing local needs and to answer the numerous unexpected questions which arise because of differences in local administration and understanding of public health activities. The satisfaction of the citizens receiving the service and persons involved in organizing a district compensates for the effort expended. So it is that gradually the number of unserved areas between districts already organized is being reduced. Encouragement can be given to many of the interested districts as public health personnel become available. Under present conditions the supply of Public Health Nurses is limited and great expansion can not be considered.

PERSONNEL.

Public health nursing in the Province has made progress. Stabilization of the service has been difficult and only possible because of the whole-hearted co-operation of the Consultant, Public Health Nursing, the Consultant in Tuberculosis Nursing of the Division of Tuberculosis Control, and the senior epidemiology worker of the Division of Venereal Disease Control. The specialized

field-workers have given unfailing assistance, not only in their respective specialized programmes but in the generalized public health service as well. Their background of generalized service and understanding of field problems has added to the assistance which they have been in a position to give.

Turnover in personnel has been the greatest problem this year, as it has been in the past five years. With the increase in staff changes, greater importance has been placed on assistance and stabilization through guidance. Changes in personnel from 1941 to 1945, inclusive, and percentage increases in changes of the Public Health Nursing staff of 1945 compared with that of 1941 is shown in Table I., as follows:—

TABLE I.—COMPARISON OF PROVINCIAL PUBLIC HEALTH NURSING STAFF CHANGES DURING THE FIVE-YEAR PERIOD 1941 TO 1945.

	1941.	1942.	1943.	1944.	1945.	INCREASE DURING FIVE-YEAR PERIOD.	
						Total.	Percentage.
Positions available	44	47	52	56	64	20	45.1
Total staff changes	26	31	37	33	48	22	84.6
Percentage staff turnover	59	66	71	59	75	17	28.8
New appointments	10	11	17	13	22	12	120.0
Resignations	8	9	12	11	16	8	100.0
Transfers	8	11	8	9	10	2	25.0

The " positions available " are shown from 1941 to 1945. Generally, the opening of a new district or an addition to staff requires additional personnel. However, it was necessary in a few cases to meet more critical situations in some areas by reducing staffs in other areas. The increase shown in this category, therefore, does not necessarily correspond with the increase in new public health nursing districts.

In 1945 there were sixty-four positions available to Public Health Nurses for which a total of forty-eight changes were necessary. Although the 75-per-cent. turnover at first seems very high, it is not more than one would expect, coming at the end of nearly six years of war. The change of marital status of many of the Public Health Nurses and the increase in districts wanting public health service accounted for the majority of placements necessary. There were sixteen resignations: One by reason of marriage, eight married nurses wishing to return to their homes, one to enlist in the armed forces, one to accept a position elsewhere in public health, one to accept a position in another field of nursing, two for attendance at University, and two for other reasons. Twenty-two new appointments were made and ten Public Health Nurses transferred to meet replacements and new positions opening during the year.

In comparing the changes in Public Health Nurses for 1945 to 1941, it is noted that varying increases have taken place, the most encouraging being an increase of 45.1 per cent. in positions available. New appointments have been 120 per cent. higher than in 1941. Resignations for this year have been just double or 100 per cent. greater than in the year 1941. The new appointments showing 120-per-cent. increase is the factor responsible for satisfactorily meeting the situation caused by the necessary increase in positions and resignations.

Will the next five-year period show the same trends? The increasing interest in prevention of illness and maintenance of sound health through public health methods indicates that the programme will show continuous growth.

In reviewing the records of the presently employed Public Health Nurses, notice is drawn to the fact that 31.2 per cent. have been field staff members for less than one year, 45.3 per cent. have been in the field from one to five years, 18.8 per cent. for from five to ten years, and 6.3 per cent. over ten years.

TABLE II.—LENGTH OF SERVICE OF PUBLIC HEALTH NURSES IN PROVINCIAL PUBLIC HEALTH NURSING BY NUMBER OF YEARS OF SERVICE, DECEMBER, 1945.

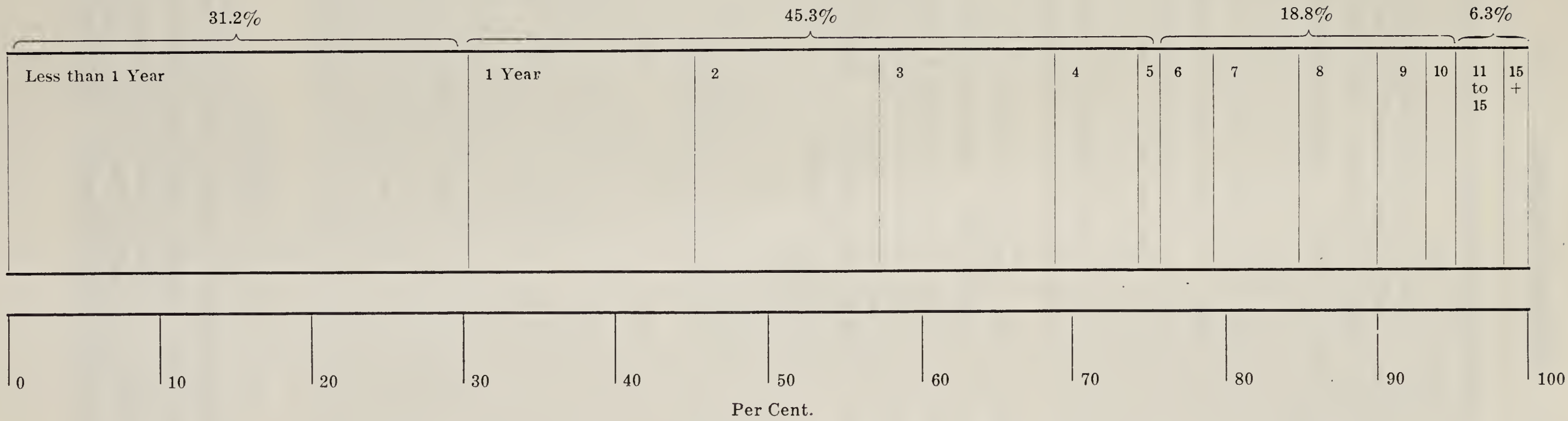
Years of Service.	Number.	Per Cent. of Total.
Under one year	20	31.2
One year	9	14.8
Two years	8	12.5
Three years	7	10.9
Four years	4	5.5
Five years	1	1.6
Six years	2	3.1
Seven years	4	5.5
Eight years	4	5.5
Nine years	1	3.1
Ten years	1	1.6
Eleven to fifteen years	2 (13, 15)	3.1
Sixteen to twenty years	1 (19)	1.6
Total	64	100.0

It can readily be seen from the foregoing summary showing turnover of staff that adequate supervision is essential if standards are to be maintained. Increase in supervisory staff is the only solution to meet the total problem. During the past year guidance has been available and planned to meet the most pressing needs. Every district was visited at least twice and a few more often during the year, with the exception of the Peace River. The staff in the Peace River had an opportunity of discussing their problems with the Assistant Provincial Health Officer. New appointees to the staff were given an orientation period with an experienced Public Health Nurse before assuming the responsibility for their own district. Credit should be given to the Public Health Nurses who contributed their service in assisting newly employed members through their orientation period.

EDUCATION.

Although only qualified Public Health Nurses are appointed to permanent positions, it is necessary for all Public Health Nurses to keep abreast of the never-ending changes. Continual education is necessary to keep informed of the latest public health information, to modify programmes, and to contribute to the drawing-up of policies for field practices. The Institute for Public Health Workers, held April 3rd, 4th, 5th, and 6th, was again found to be a most practical form of in-service education. The highlight of the Institute was a lecture given by Dr. J. M. Ewing, " The Balanced Life." Lectures and discussions on the most closely allied service—Social Service—were enlightening. Papers presented by members from the Divisions of the Provincial Board of Health and

Chart I.



Length of service of Public Health Nurses in Provincial Public Health Nursing by per cent. of total, December, 1945.

field members provided tangible material which was adopted and put into effect in the field programmes during the year.

" P.H.N. News and Views " continues to function as the means of exchanging information, emphasis on programmes, and notification of new policies. A wide scope of subjects which appeared as articles in national and international journals was circulated by the News Letter. Information which has a Provincial-wide significance, although gathered specifically at the request of individuals, is distributed through the News Letter; material for the Reference Manual, which includes services given by allied agencies, co-operative efforts of health and other community groups, has its first general circulation to the public health staff through the News Letter. This semi-personal method of interchange of ideas between the field personnel and senior staff has proven its value.

Definite progress has been made in the regional group meetings of the Public Health Nurses and in staff meetings at which each person actively participates. We are indebted to the Vancouver Island Public Health Nursing group for their discussion and practical suggestions in regard to the new simplified record forms; to the Fraser Valley group for their revision of the prenatal letters; to the East Kootenay group, who have simplified home sanitation problems for Public Health Nurses; to the Okanagan Valley for their wide variety of reports and specific projects, which were made available Provincially; to the Peace River for their interest in clarification of personnel policies and educational facilities. We admire the Prince Rupert, Cariboo, and East Kootenay groups who, in spite of difficult circumstances, held meetings for general discussion of programmes and problems.

Every encouragement by way of suggestion, financial assistance, and recognition of accomplishments will continue from the senior staff of the Provincial Board of Health as an incentive to this type of education.

PUBLIC HEALTH NURSING STUDENT PROGRAMME.

Student field experience is provided for public health nursing students from the University of British Columbia in selected areas served by Public Health Nurses in the Province to orient the student to a public health nursing programme in a rural community and to provide definite experience in various phases of a generalized public health nursing programme. During the past year thirty-two students were given two- and three-week periods of experience in public health nursing and Health Unit areas. Much credit is given the field Public Health Nursing staff for their part in making this rural experience possible. Tangible evidence of the value of the work they carried on with students is shown in the number of students who returned to rural public health nursing work following completion of their course.

CHANGES IN POLICIES.

A new simplified record system for charting results of educational efforts, demonstrations, and actual public health nursing services has been in use for nine months and promises to be the most effective system yet adopted. The Record Instruction Manual has been brought up to date and clarifies the use of all public health records now being used in the field. Review of records resulted

in discontinuation of several forms which did not warrant the time and use for which they were at first intended.

A salary schedule materialized after several years of preliminary planning. After having been in effect for one year, need for adjustment was necessary to have a standard adaptable to all Public Health Nurses. The schedule makes allowance for a probationary period of one year at which the salary is $1,620. The basic salary of $1,680 is paid at the end of the probationary year. Increases are then given at the rate of $60 a year for two years and then every other year until the maximum of $1,980 is reached. Length of service after ten years is recognized by further increases every five years. A Public Health Nurse may change her classification by progressing to a senior position for which there is a salary comparable to the increased responsibility. In the year and a half in which the schedule has been recommended, all but one district have given favourable consideration to it. Further consideration is expected in this district, and it is hoped that as a result the salary schedule will be in operation in every public health nursing district.

Associated hospital services have been made available to public health field members. Although the number participating was well above that required, it is expected that others will take advantage of the service next year. Attempts to obtain medical service through Medical Services Association have been to no avail as yet. Public Health Nurses desiring medical service seem to want it very much but as yet have not been able to influence sufficient numbers to meet the 75-per-cent. membership which is necessary.

The Bureau of Economics and Statistics devised a method by which Public Health Nurses receive monthly statistical reports of their work as compiled from the daily reports. The Division of Vital Statistics, Provincial Board of Health, will be compiling the information in the new year. It is expected that the Division's efficient methods and understanding of public health activities will be apparent in the statistics made available promptly to the field.

An innovation of a temporary record for noting the amount of venereal disease work carried on by each Public Health Nurse has been in use for three months. It is the intention to determine the need of such work in various areas of the Province and the adjustment necessary to meet the needs of controlling the spread of venereal diseases. Pertinent items from the temporary report will be included in the daily report following the trial period.

Success and co-operative efforts are practically synonymous in public health nursing. Difficulties have seemed out of proportion at times, and it has only been with the assistance of every Public Health Nurse individually and in group activities that progress has been made this trying year. Appreciation of every staff member is expressed for the work carried on to the best of her ability.

PLANS FOR 1946.

To-day the great problem of our organization is that of meeting difficulties resulting from a shortage of qualified workers, both professional and non-professional. In order to attract more qualified Public Health Nurses, to show appreciation for past services of employed Public Health Nurses, and so improve public health service to citizens of a community, it will be necessary to continually increase the attractiveness of public health nursing positions.

The principal factors that determine the attractiveness of any jobs seem obvious. They are financial remuneration, selection on merit, opportunity for professional development and adequate tools with which to work, and other reasonable personnel policies. Some of these principles already are claimed as ours but there are many more to strive for in the coming year.

An evaluation record for Public Health Nurses has been considered for the near future. It is anticipated that a plan will be drawn up and sent to the field staff for suggestions which will be incorporated into the revised and final form.

Uniforms, long a necessity for Public Health Nurses, have been supplied in inadequate numbers because of material shortages. The next year promises a more satisfactory outlook through better supply of materials. Plans for financial assistance made previously will be reconsidered as the complete uniform requirements are met.

The appointment of a Public Health Educator broadens the scope of help which can be extended to every one. Educational material, such as papers, pamphlets, and posters, will be part of the programme, which will be expanded and also include co-ordination of educational activities of all Divisions within the Department.

Plans for health insurance are still being discussed and as yet are only in the formative stages. New developments will be placed before the Nurses so that they may be kept up to date and ready to co-operate in the plan as it affects them.

The student programme, which has enlarged through increase in numbers of nurses working toward their degree or certificate in public health nursing at the University, and because of longer periods spent in the rural field, will lead to a discussion of more efficient service to students. Recognizing the additional educational demands which all health organizations have made on them, the Provincial Board of Health expects to utilize offers of assistance made from international groups. The strengthening of the student rural field programme will undoubtedly lead to a closer correlation of the theory and the practice of public health.

The Institute for Public Health Workers is anticipated to bring forth assistance from leaders in the Provincial public health field and noted teachers experienced in public health.

Instruction manuals are anticipated to be ready for use within the year. The Division of Tuberculosis Control has the section on Tuberculosis Public Health Nursing practically ready for printing. The Division of Venereal Disease Control has concentrated on reference material for public health workers and will be presenting instruction for the public health nursing programme in venereal diseases. Other sections of the generalized programme will be ready in 1946. Information in the public health work of the Cancer Institute and more detailed assistance on mental hygiene programmes will be forthcoming following clarification with the respective associations carrying out corrective measures.

With the continual change and advancement in public health work, it is imperative to have an understanding and competent person on hand to help in directing the programmes to meet the needs of the community. For this purpose, three Public Health Nurses with experience, personal and leadership quali-

fications, and the opportunity of participating in supervisory courses will be chosen to give assistance.

This year has been primarily a year of overcoming problems resulting from years of international conflict. The coming year holds promise of advancement based on the experience gained in 1945 and determination to complete plans which will influence public health personnel and programmes.

REPORT OF THE CONSULTANT IN NUTRITION.

MARY F. BALDWIN, B.Sc. (H.Ec.).

The establishment with the Provincial Board of Health in October, 1942, of a Nutrition Service with qualified personnel showed recognition of the fundamental importance of proper nutrition for good health. Broadly speaking, the aim of the Nutrition Service of the Board of Health is to co-ordinate the efforts of nutrition workers already in the field and to stimulate and assist local health services to carry on nutrition instruction as part of their regular health programme. The purpose of the programme is to help make Canadians healthier through the application of well-established principles of nutrition.

ORGANIZATION OF NUTRITION SERVICES.

FEDERAL.

The Nutrition Division of the Department of National Health and Welfare provides valuable technical advice and services which are not practicable to maintain on a Provincial level. Through regional representatives stationed throughout Canada, they also serve as a clearing-house for nutritional information for the Provinces.

Late this year a Dominion-Provincial Nutrition Committee was formed as a sub-committee of the Canadian Council on Nutrition. This latter is an advisory body to the Federal Nutrition Division. Formation of this new committee will facilitate bringing purely Dominion-Provincial problems to the attention of the Federal Nutrition Division.

PROVINCIAL.

A Provincial Nutrition Committee under the chairmanship of the Provincial Health Officer was formed in 1943 to co-ordinate nutrition work done in the Province and advise on the expansion of a broad programme of nutrition education. The nutrition services of the Provincial Board of Health, the British Columbia Division of the Canadian Red Cross Society, and the Greater Vancouver Metropolitan Health Committee are co-ordinated through this Committee. Each of these bodies employs a Nutritionist, and each Nutritionist, in order to avoid duplication, has a definite geographical area of the Province in which to work.

Nutrition services are maintained by other agencies in the Province not represented on the British Columbia Nutrition Committee. Nutritionists with these agencies have been working jointly with those represented on the Committee on several projects during the past year. It is hoped that reorganization of the British Columbia Nutrition Committee may be effected to include all such agencies with an established nutrition service.

Local.

Although local nutrition committees were formed in a number of British Columbia communities, these have functioned mainly when the Nutritionist was working in that community.

Many of the local programmes are carried on directly through public health staff, teachers, and welfare staff without the assistance of a local committee.

REPORT OF PROVINCIAL BOARD OF HEALTH NUTRITION SERVICES IN 1945.

Less field-work of the type reported on in 1944 has been carried on in 1945. Many other services have been extended.

I. Co-operation with other Government Departments and Branches concerned with Nutrition.

1. *Social Assistance Branch.*—A resolution from the British Columbia Nutrition Committee resulted in a request for the preparation of a report on food allowances and costs. This report has been prepared and is to be considered as a basis for social allowances. The basis for food lists given in the report is an adequate nutritional standard endorsed by the Canadian Council on Nutrition. If the report is approved, social allowances for food will be subject to periodic review to keep them in line with the latest nutritional information and with current food prices.

2. *Department of Education.*—Nutritionists with the Board of Health co-operated with the Department of Education on two projects correlating nutrition and art. One was a place-mat contest sponsored by the Federal Nutrition Division and the other a play competition sponsored by the Victoria Nutrition Committee.

At the present time the Department of Education does not employ a Nutritionist to do work in connection with school-lunch programmes. This work is supervised and carried out in part by Nutritionists with the Board of Health in consultation with Department of Education officials.

Up-to-date nutrition information and teaching materials were drawn to the attention of teachers several times during 1945 through articles contributed to the Department of Education magazine, "The Rural School." A display of material useful to teachers was also prepared for the Victoria Summer School of Education. A number of new teaching aids are in the process of preparation and will be available to teachers in 1946.

II. Quantity Food Service.

1. *Institutional Service.*—The feeding facilities and food served in Provincial institutions under the jurisdiction of the Provincial Secretary are inspected periodically. Such institutions visited during 1945 included the Allco Infirmary, the Provincial Home at Kamloops, and the Boys' and Girls' Industrial Schools. This service has also been requested for Provincial gaols.

Certain other centres licensed under the "Welfare Institutions Licensing Act" were visited with a view to determine what service might be provided. As a result of these visits, arrangements are being made with the Chief Inspector of Welfare Institutions and Hospitals to have certain information furnished

by their Inspectors regarding the food served in institutions and hospitals. This information will show the necessity of follow-up work on the part of a Nutritionist.

2. *Industrial Plants.*—The Federal Nutrition Division is empowered as long as the war emergency period lasts to inspect food service and facilities in industrial plants on war contracts. The Board of Health has been provided with records of such inspections in British Columbia so that they will be in a position to take over this service on a request basis when the war emergency period is declared over.

3. *Cafeteria for Provincial Employees in Victoria.*—This cafeteria is managed by a committee of the Provincial Government Employees Association, of which the Nutritionist with the Board of Health has been chairman for the past two and one-half years. During 1945 record forms and recipes which might be useful for quantity food service were tried out in this cafeteria.

4. *School-lunch Programmes.* — Programmes already under way were inspected and help given when a Nutritionist was in the district. Since less field-work was done during 1945, fewer schools were visited by the Nutritionist than in previous years. A number of requests for assistance with lunch programmes were dealt with through correspondence.

5. *Restaurant Service.*—Contact was made late in the year with British Columbia branches of the Canadian Restaurant Association regarding establishment of a training-school in British Columbia for restaurant help. Restaurant-owners have been asking for this for some time, and machinery is now set up for such training under the Canadian Vocational Training plan for ex-service personnel. The Senior Nutritionist with the Board of Health has been invited to meet with those making arrangements for this training programme.

It is hoped through the establishment of such a training programme that instruction can be given in nutritional principles. In this way it will be possible to affect indirectly the eating habits of a large number of persons who eat regularly in restaurants.

6. *Summer Camps.*—The serving of well-balanced meals in camps and in schools, through lunch programmes, provides an unequalled opportunity to demonstrate the value of adequate nutrition. Eating habits established in these places have been shown to carry over into the home and so affect the habits of the whole family.

Information regarding the planning of camp meals has been furnished the Provincial Boy Scouts Association this year. It is planned to extend this service to other such groups as they request it and as time allows.

III. Nutrition Demonstration Clinics.

The Federal Nutrition Division has made available to the Provinces a team of doctor and nurse with specialized training to conduct nutrition demonstration clinics. British Columbia will be the first Province to make use of this service.

Arrangements have been made to have a clinic team visit the Province for six weeks in January and February. While in the Province they will examine groups of school children in six distinct areas for physical signs of nutritional deficiencies.

The clinic itself follows these examinations and is a meeting of local public health personnel and others concerned with the health of the people; it is devoted to the discussion of various types and degrees of malnutrition generally found in the area, together with suggestions for their improvement.

The purpose of the clinic is to acquaint professional and non-professional persons interested in nutrition and health with their local problems. The work is primarily educational but will also contribute to scientific knowledge of general trends in the nutritional status of the whole population.

Preliminary work for the clinics has been handled through the nutrition services of the Greater Vancouver Metropolitan Health Committee, the British Columbia Division of the Red Cross, and the Provincial Board of Health. To date this has meant contacting the local people in the districts where clinics are to be held and obtaining a week's diet record from the children to be examined. These diet records have been checked for adequacy and will provide a basis for follow-up work in the homes following the physical examinations. This follow-up work will be done through local public health services.

IV. Information Service.

Up-to-date scientific information on all aspects of nutrition was interpreted and furnished to a number of key groups during 1945. This was done through the review and preparation of new material and the release of information through the most appropriate channels, as follows:—

1. Members of the Provincial Board of Health staff are kept up to date through regular staff meetings and the circulation of regular staff bulletins.

2. Public health personnel in the field are kept up to date through the monthly News Letter and through correspondence and periodic visits. The Institute held each spring affords another opportunity to discuss the use of nutritional materials with this group. Considerable work for the benefit of public health workers was done on nutrition sections of the Public Health Nursing Manual.

3. Other professional groups, such as welfare field service staff and health teachers, are supplied with information and material through public health personnel in the field and also directly through their department heads and regular staff bulletins.

The low-cost food lists mentioned earlier in this report will be of value to welfare staff. Materials furnished teachers were referred to earlier in this report.

A nutrition refresher course for professional groups was held in Victoria early in 1945. This was given on a trial basis by the regional representative of the Federal Nutrition Division to a group of Public Health Nurses, home economics and health teachers, and welfare staff in the Greater Victoria area. It was felt that the course was of too general a nature and should be modified to deal more specifically with cases and problems met by these groups in their work.

4. *Public.*—Comparatively little of the Nutritionists' time is spent meeting the public directly. It is more economical of time and also more effective to work with professional groups such as those mentioned above. These workers are in contact with and are known to the people in their district and are in a better position to carry on a continuous and effective programme.

V. Staff.

Mrs. E. Trenholm was appointed, August 1st, to the temporary staff as Junior Nutritionist. She has been supervising the work done in the Government employees' cafeteria and has also reviewed and catalogued considerable nutrition material for the Board of Health library.

Miss E. M. Yvonne Love was appointed, October 1st, to succeed Miss Baldwin as Senior Nutritionist with the Board of Health. Miss Baldwin resigned her position on December 19th. It is hoped that another Nutritionist will be appointed early in 1946 in order that Miss Love will be in a position to take post-graduate work in public health in the fall.

VI. Extra-Provincial Meetings.

The Canadian Council on Nutrition met in Ottawa in May. The Senior Nutritionist with the Board of Health is a member and attended the sessions. The most far-reaching decision reached was the adoption of a new statement on dietary standards to replace, for specific purposes, the former standard drawn up by the United States Food and Nutrition Board and adopted by the Canadian Council on Nutrition in 1942. The food lists prepared for the Social Assistance Branch are based on this new standard.

A national nutrition conference was held following the Council meetings. This was the first of its kind in Canada and was attended by almost 200 nutrition workers from all parts of the Dominion. The large attendance was indicative of the active interest in nutrition education of groups all across Canada.

A meeting of Nutritionists employed by Dominion and Provincial Departments of Health was referred to earlier in the report. This was the first meeting of its kind and was held in Ottawa early in December. As a result of the meeting, a Dominion-Provincial Nutrition Committee was formed, which will meet several times a year to discuss purely Dominion-Provincial matters.

VII. Conclusions and Observations.

Less field-work of the sort reported on in 1944 was carried on during 1945. The time of the Senior Nutritionist has rather been spent in attempting to evaluate work done in the past so as to plan a more effective programme for the future.

Work has also been started on a number of new projects, such as the low-cost food lists and the Public Health Nursing Manual, which should have far-reaching effects.

Much remains to be done. Results from the nutrition demonstration clinics will probably show that some signs and symptoms of nutritional deficiency exist amongst the people of British Columbia. Plans for the future must therefore include further development of services now being given, with particular emphasis on the instruction of public health and other trained persons in the field in nutritional principles which they can in turn make use of in their work.

New approaches to the problem of inadequate nutrition must continue to be tried, and the most effective ones incorporated into a continuing programme.

The most encouraging sign for the future has been the growing spirit of co-operation between Nutritionists in the Federal, Provincial, and local fields. With such a spirit behind the programme, an adequate solution can be found to new problems which may arise in the future.

REPORT OF THE DIVISION OF VITAL STATISTICS.

J. D. B. Scott, B.A., B.Com., Director.

INTRODUCTION.

For some years the Division of Vital Statistics has experienced a steady growth both in the volume and variety of work and in the number of personnel required to do that work. In order to efficiently carry out the duties expected of it and also to plan for the future, a thorough survey was made of the functions of the Division, its organization, and especially the duties performed by the key personnel. As a result of the survey, the central office of the Division was reorganized to include seven sections, each headed by a section head. Thus the basis of responsibility was broadened to include more of the senior staff and a more clear-cut division of duties was made.

The ensuing report endeavours to give an idea of what has been done during the year and also what remains to be done in the future. It will be noticed that many of the activities of the Division and the progress made have been summarized under the headings "The Division's Contribution to the War Effort" and "Summary of Registration and Related Procedures." Under these headings, subjects are dealt with such as the volume and extent of the verifications done by the Division, the services performed in connection with legal procedures relating to vital statistics, various lists of births, deaths, and marriages supplied—especially to the Federal authorities, the handling of the death records of overseas casualties, and comments on the volume of registrations received. Problems in connection with the completeness of registration have been summarized. Legislation, both new and proposed, governing the administration of the Division has been mentioned. Details of active co-operation between the Division and both the central office of the Provincial Board of Health and its other Divisions have been outlined. Reference is also made to the work done for the Family Allowance Branch of the Department of National Health and Welfare. The formation of the Vital Statistics Council for Canada is mentioned, together with a review of the proceedings.

The report concludes with an outline of the problems confronting the Division in the immediate future, including Doukhobor and Indian registration, drafting of instruction manuals, introduction of pocket-book size plasticized birth certificates, and the extension of statistical services to the Provincial Board of Health, etc.

ADMINISTRATION OF THE DIVISION OF VITAL STATISTICS.

Principal Functions.—Briefly, the principal functions of the Division are twofold.

First, under the authority of the "Vital Statistics Act," to ensure accurate registration of every birth, death, still-birth, and marriage occurring in the Province. Also, to make any change in compliance with the aforementioned Act or the "Change of Name Act." Certification for documentary purposes is an essential corollary of registration. Furthermore, the administration of the "Marriage Act," because of the close association with the statutory requirements for the recording of marriages, is the responsibility of the Division.

The second important function is to provide statistical tabulations and analyses as required, especially for the Provincial Board of Health. It must co-operate with the other Divisions of the Provincial Board of Health in carrying out a public health programme laid down by the Provincial Health Officer. To do this effectively, there must be full utilization of all relevant facts either from data collected within the Provincial Board of Health or elsewhere.

Thus the two main functions of the Division are legal and demographic in concept.

A series of eight charts is included hereafter which illustrate not only the relationships of the sections within the framework of the Division but also indicate the work which must be done in each section. Personnel charts were also prepared according to the respective section but these are not shown herein.

Chart I., Organization Chart of the Division of Vital Statistics.—This chart shows the relationship of the Division of Vital Statistics within the Department of the Provincial Secretary. It should be noted that the chain of responsibility goes from the Provincial Secretary to the Provincial Health Officer and from him through the Bureau of Administration and the Bureau of Local Health Services to the Division of Vital Statistics. Within the Division itself the flow of responsibility is through the Administration Section to each of the other six sections. It should be borne in mind that all sections are not necessarily of equal importance but rather they constitute what appears to be the most logical division of the work. An example of this is the " Marriage Act " section. The work of this section is so different from that of the other sections that it constitutes a separate entity, yet there is at the present time not sufficient work to require a staff similar to that needed in the Registration Section or Certification Section.

The chain of responsibility follows through from the respective sections to the local officials of the Division, namely, the District Registrar and Marriage Commissioner. Local Health Services are shown occupying an intermediate position between the District Registrar, Marriage Commissioner, and the public designated as " communities." With the development and stabilization of full-time Health Units on a Province-wide basis, it is likely that several registration districts will lie within the boundaries of a separate Health Unit. In order for each Health Unit to carry out an effective programme, it must have complete vital statistics information pertaining to the area it serves. Such information will be in the form of lists of births for its maternal and child welfare programme, deaths from communicable diseases, and other related public health data, including statistics of population, mortality and morbidity rates, etc. Much of this information is being compiled for local health services, but a more highly developed and closely integrated system must be developed to meet the full requirements of the local health services. This development will take place with the advice and full concurrence of the Bureau of Local Health Services.

It should be understood that in some instances, based on the practical reality of the situation, the flow of work is directly from each section to the public and not through the intermediate steps; an example is the many requests for birth certificates by private individuals. The Certification Section deals directly with them in all routine instances. It should be understood though that channels are established and are operative as and when the need arises.

CHART I.

ORGANIZATION CHART—DIVISION OF VITAL STATISTICS.

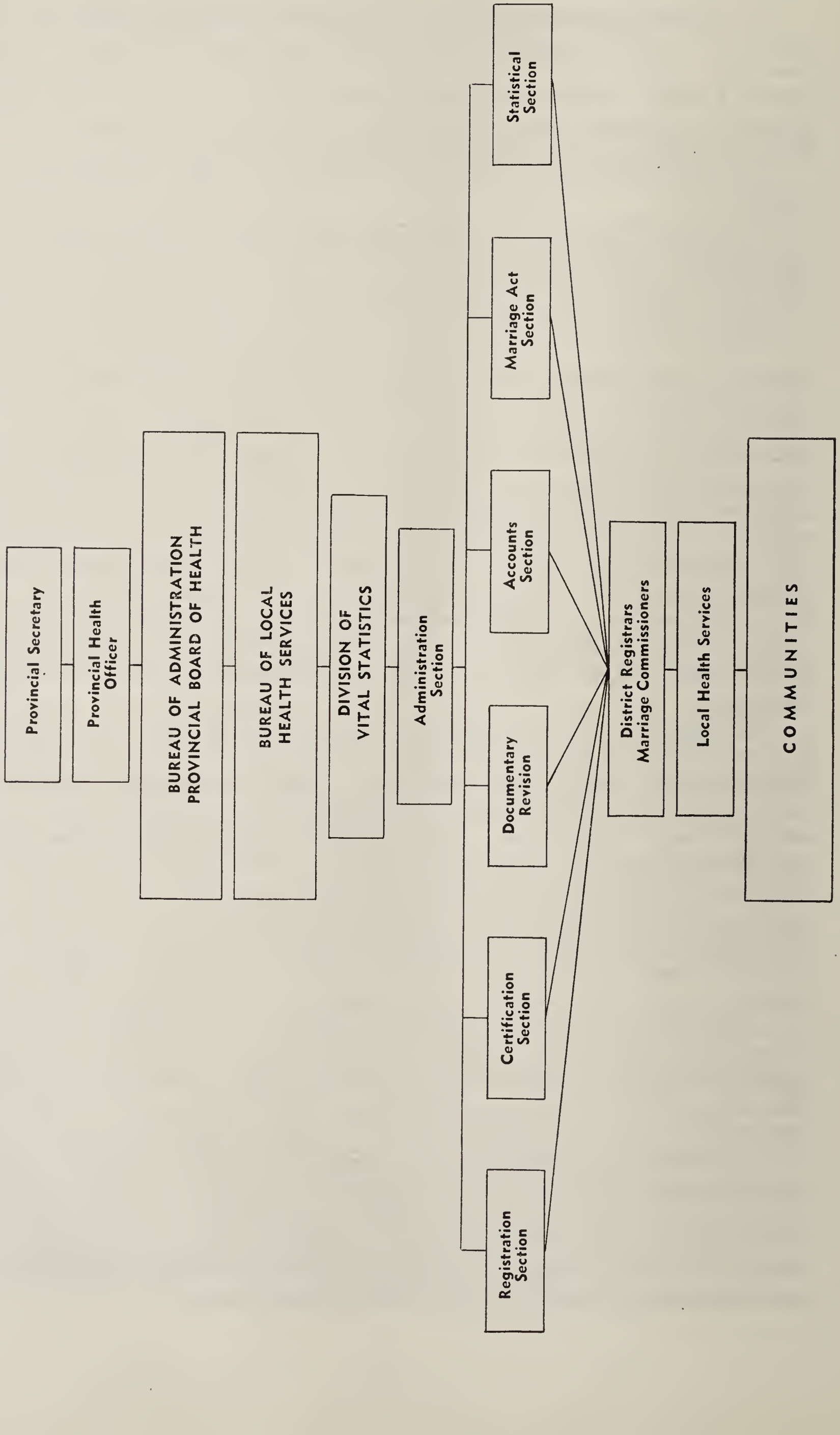


Chart II., Administration Section.—The name of the section, " Administration," connotes its function without a great deal of explanation being necessary. It includes planning and policy, personnel problems, generalized office functions, and certain specialized functions best controlled in this section.

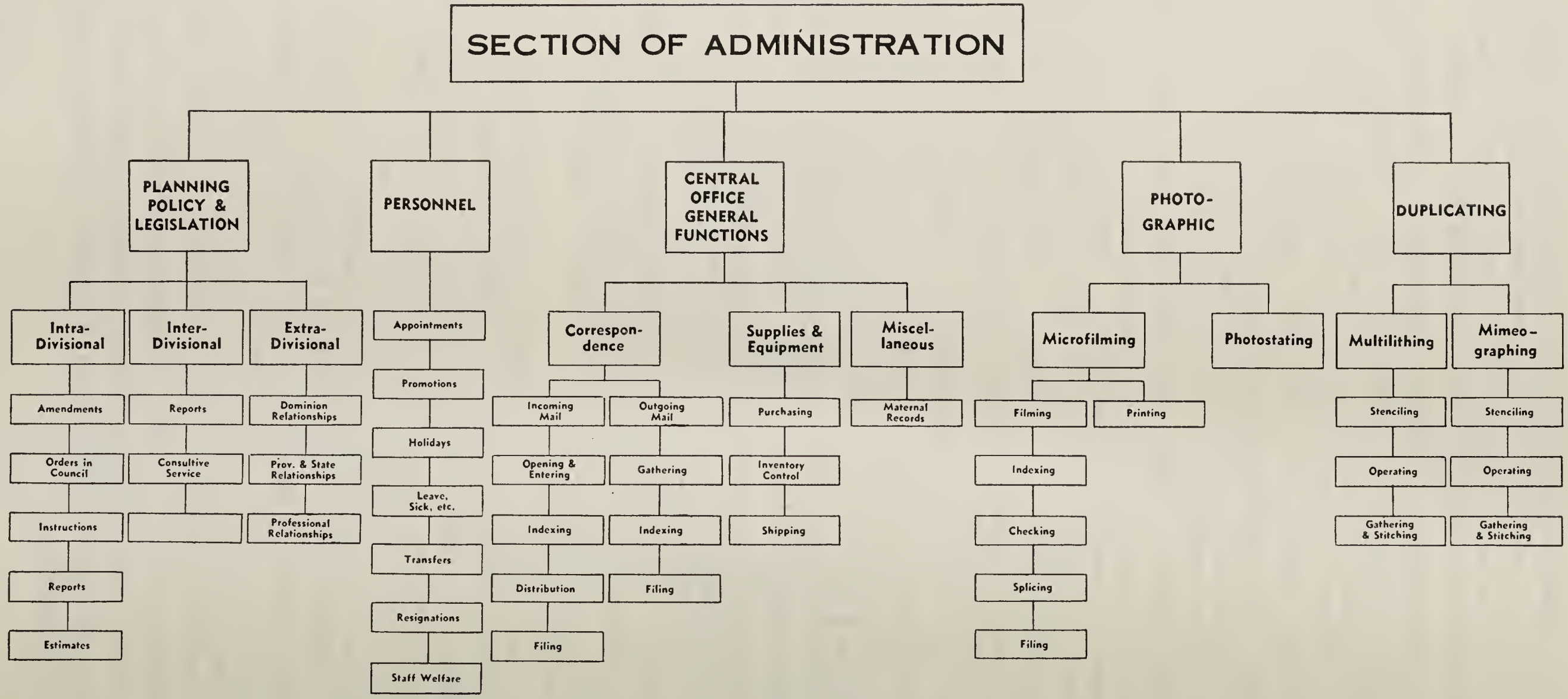
Under the heading of " Planning and Policy," such matters as amendments to the " Vital Statistics Act," " Marriage Act," " Change of Name Act," and other allied legislation bearing on the work of the Division is drafted or appraised. Orders in Council, instructions, estimates, and the various reports stem from this section also. The term " interdivisional " includes " interdepartmental " and signifies the advisory and consultative service rendered in connection with annual reports, record systems, statistical analyses, etc. If and when any of these matters have become formalized, they become the responsibility of the respective sections, but while they are in the formative stage or affect interdivisional or interdepartmental policy and procedure, they come directly under the purview of this section. Often matters of policy occur arising from the considerable amount of work done by the Division for the various Departments of the Federal Government. The formation of the Vital Statistics Council for Canada foreshadows much more extensive relationships on the part of the Division both between the Dominion Bureau of Statistics and the other Provinces. The Division is interested in promoting the professional activities of its key personnel within such organizations as the Canadian Public Health Association, the American Public Health Association, the American Association of Registration Executives, etc., in the belief that the stimulation acquired keeps alive a progressive spirit among the staff and promotes interest and efficiency in all matters relating to public health, vital statistics, and allied subjects.

Personnel problems, ranging from proper placement of new appointments, promotions, sick-leave, etc., are the definite responsibility of the Administration Section. Staff welfare, too, can not be ignored. Unless the personal problems of the employees are studied and an attempt made to solve them, they tend to interfere not only with an individual's own work but also with the efficiency of his associates. Included under the heading of " Staff Welfare " are the organized social activities of the Division.

There are certain functions within an organization such as the Division of Vital Statistics which are common to or affect all other sections; for example, correspondence, or rather the way in which it is routed and handled and filed. Likewise, stock control, the ordering of supplies and equipment is a function of this section in order to ensure a proper degree of control.

Utilization of modern photographic procedures is in its early stages in the Division. Photostating is an established procedure. The microfilming of the vital statistics records of the Province nears completion. However, apart from safeguarding these records, miniature film must be utilized as a means of conserving storage space and reducing it to a minimum; for example, microfilming of hospital returns, physician's notice of birth cards, letter files, etc. There is also microfilming work to be done interdepartmentally, with the same purpose in view. Also, reproduction of negative images of registrations into positive enlargements in lieu of certificates will become a standard practice as soon as equipment is available.

CHART II.


SECTION OF ADMINISTRATION
PLANNING POLICY & LEGISLATION
PERSONNEL
CENTRAL OFFICE GENERAL FUNCTIONS
PHOTO-GRAPHIC
DUPLICATING
Intra-Divisional
Inter-Divisional
Extra-Divisional
Amendments
Orders in Council
Instructions
Reports
Estimates
Reports
Consultive Service
Dominion Relationships
Prov. & State Relationships
Professional Relationships
Appointments
Promotions
Holidays
Leave, Sick, etc.
Transfers
Resignations
Staff Welfare
Correspon-dence
Supplies & Equipment
Miscel-laneous
Incoming Mail
Outgoing Mail
Opening & Entering
Gathering
Indexing
Indexing
Distribution
Filing
Filing
Purchasing
Inventory Control
Shipping
Maternal Records
Microfilming
Photostating
Filming
Printing
Indexing
Checking
Splicing
Filing
Multilithing
Mimeo-graphing
Stenciling
Operating
Gathering & Stitching
Stenciling
Operating
Gathering & Stitching

The Division possesses multilith and mimeograph equipment sufficient to meet its own requirements as well as to provide rapid service for the central office of the Provincial Board of Health and the other Divisions. Forms, form letters, bulletins, instructions and manuals, etc., are duplicated within the Division.

Chart III., Registration Section.—The most of the work of this section is divided between the processing of current returns and delayed registrations. Current returns must be carefully scrutinized, and any incomplete or incorrect registrations are returned to the District Registrar. Returns must be in good order on account of the time and effort involved in making microfilm retakes and in correcting punch-cards, indexes, and statistical tabulations.

The section must be for ever watchful to ensure that registration of births, deaths, marriages, and still-births is complete. For this reason a number of checks have been instituted, such as the physician's notice of birth, hospital returns, school returns (where children entered school for the first time), marriage registers, Coroners' reports, motor-vehicle accident reports, etc. Hence, it is the responsibility of this section to make sure that no vital statistics event goes unregistered.

Delayed registration, or rather the effecting of unregistered births, deaths, and marriages, is one of the major registration problems of the Division. Documentary evidence must be submitted and carefully evaluated before an application for delayed registration can be accepted. Minimum Standards of Acceptable Evidence for Delayed Registrations have been adopted by all Provinces. Care has to be taken to ensure that delayed registrations come up to these standards.

Registrations of the deaths of personnel in the armed forces killed or missing overseas, who were residents of British Columbia at the time of their enlistment, have been filed in the central office of the Division through the co-operation of the Department of National Defence and the Dominion Bureau of Statistics. These registrations will be received for some time to come as there is a considerable time-lag between the date of death and the date this section receives the documents. Deaths of residents of British Columbia occurring in other states or Provinces are made known to the Division by the receipt of copies of registrations from the state or Province of occurrence of the death. These registrations, as well as the overseas casualties, are filed principally for the purpose of completing the statistical picture regarding the absent members of the population.

In order to assist the public in connection with delayed registration, the Division has, over a period of years, done everything possible to obtain early records of baptisms, burials, doctors' personal records, etc. This effort must be continued because too many people whose births are unregistered are unable to obtain proof satisfactory for registration purposes. To prevent relevant records and documents now in existence from becoming lost or destroyed is a function of this section under the general designation of "Archives."

Chart IV., Certification Section.—The work of this section is less diverse than that carried on in the other sections. Also, on account of the consistent demand for certificates, its routines have been established. Searching requires definite rules, which have been built up through experience. A considerable

CHART III.

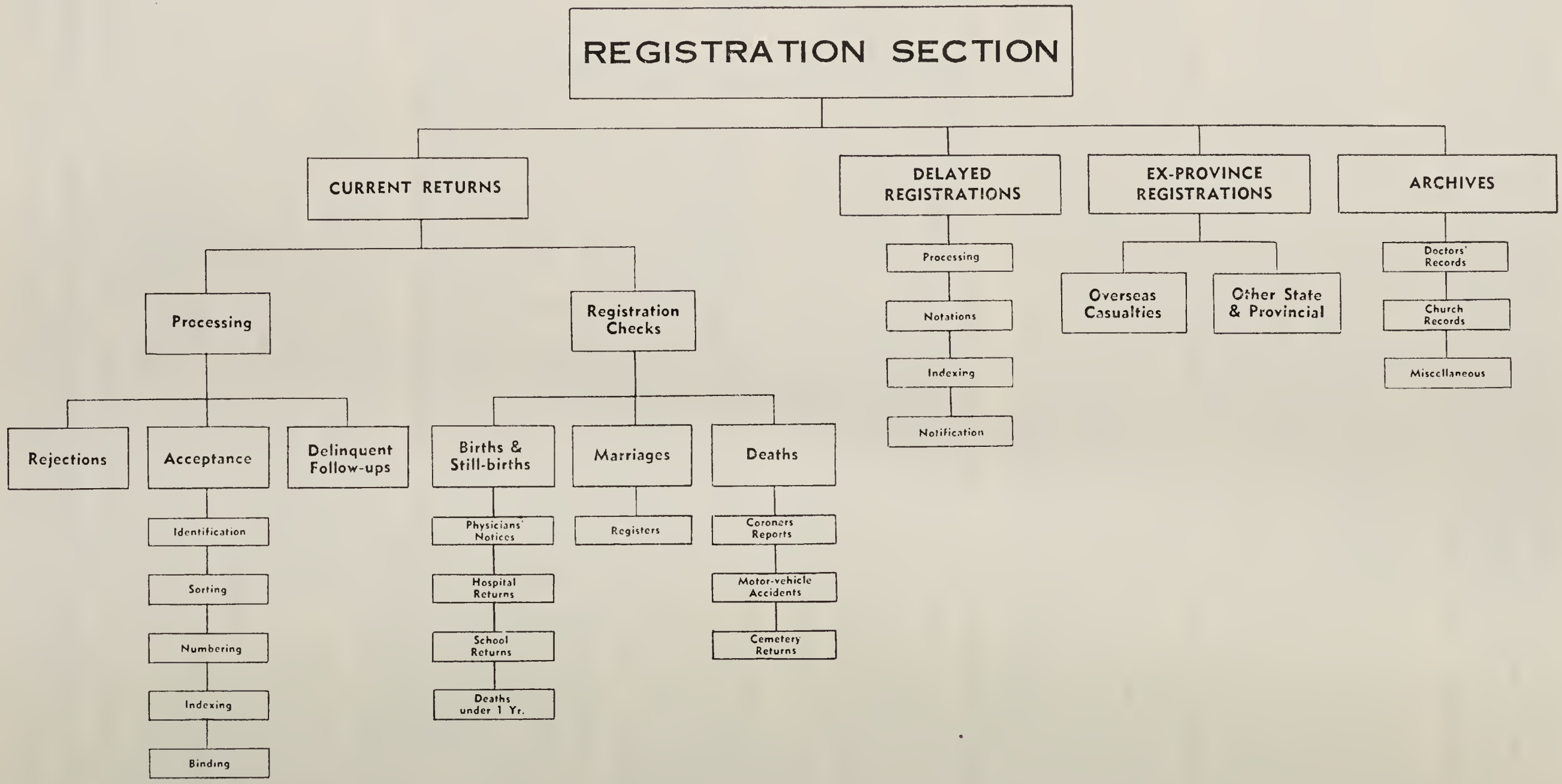
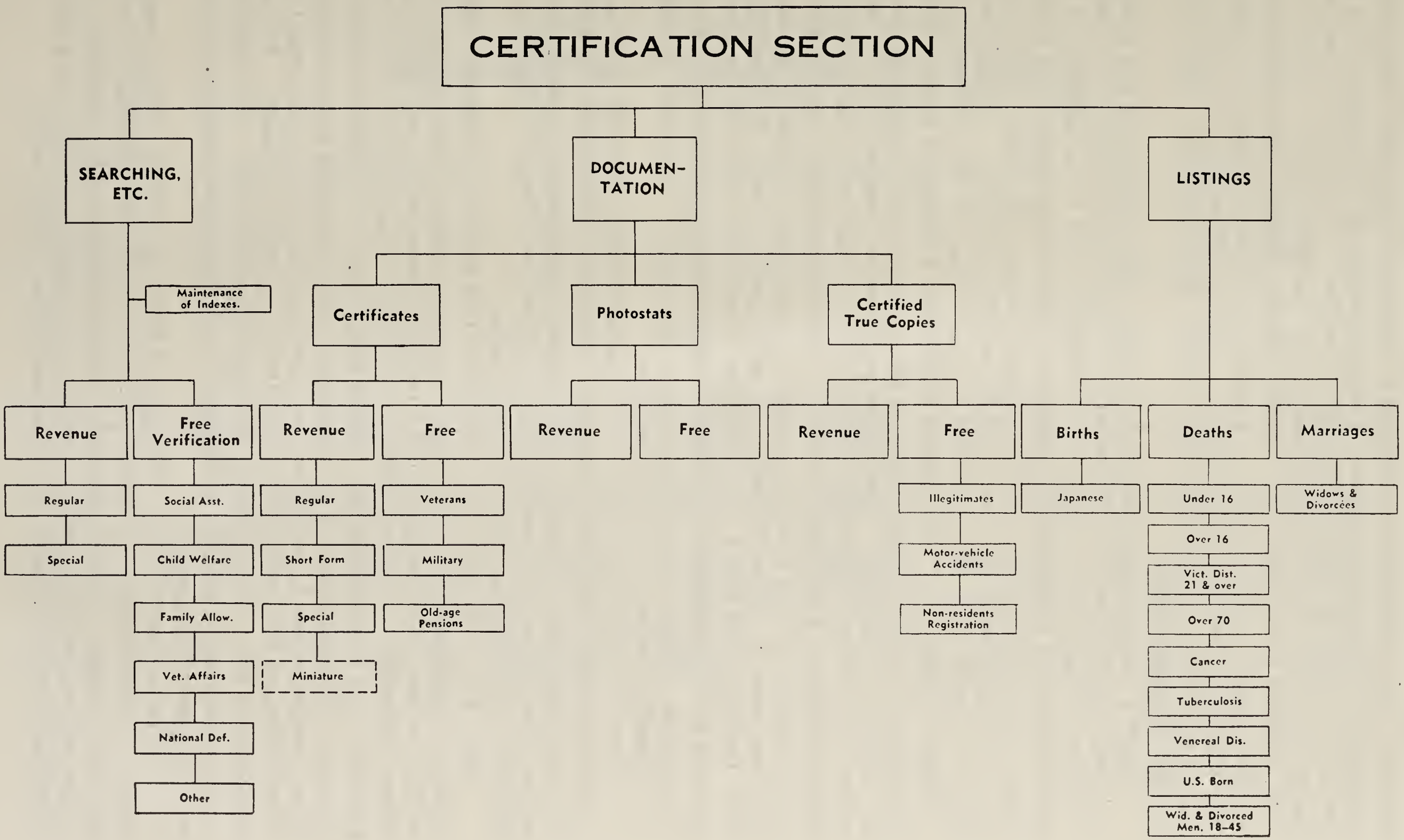

REGISTRATION SECTION
CURRENT RETURNS
Processing
Rejections
Acceptance
Identification
Sorting
Numbering
Indexing
Binding
Delinquent Follow-ups
Registration Checks
Births & Still-births
Physicians' Notices
Hospital Returns
School Returns
Deaths under 1 Yr.
Marriages
Registers
Deaths
Coroners Reports
Motor-vehicle Accidents
Cemetery Returns
DELAYED REGISTRATIONS
Processing
Notations
Indexing
Notification
EX-PROVINCE REGISTRATIONS
Overseas Casualties
Other State & Provincial
ARCHIVES
Doctors' Records
Church Records
Miscellaneous

CHART IV.


CERTIFICATION SECTION
SEARCHING, ETC.
DOCUMEN-TATION
LISTINGS
Maintenance of Indexes.
Certificates
Photostats
Certified True Copies
Revenue
Free Verification
Revenue
Free
Revenue
Free
Revenue
Free
Births
Deaths
Marriages
Regular
Social Asst.
Regular
Veterans
Illegitimates
Japanese
Under 16
Widows & Divorcées
Special
Child Welfare
Short Form
Military
Motor-vehicle Accidents
Over 16
Family Allow.
Special
Old-age Pensions
Non-residents Registration
Vict. Dist. 21 & over
Vet. Affairs
Miniature
Over 70
Cancer
National Def.
Tuberculosis
Other
Venereal Dis.
U.S. Born
Wid. & Divorced Men. 18–45

amount of free verification is provided to Dominion, Provincial, and municipal authorities for different purposes. The maintenance of the indexes of the Division are an essential responsibility of this section. A variety of revenue-producing certificates are issued, depending upon the requirements—regular, short form, certified true copies, etc. Pocket-book size plastic birth certificates will be issued shortly by this section. A glance at the chart shows the number of lists which are compiled, each containing varying information, depending upon the use to which it will be put by the various official agencies. Most of these lists are compiled weekly.

Chart V., Documentary Revisions Section.—The function of this section is to handle all changes of a documentary nature, as provided for under the "Change of Name Act" or the "Vital Statistics Act." In addition, it must make notation of adoptions and divorces on the corresponding birth and marriage records respectively on file in the Division. The work of this section must be handled with the greatest care and discrimination. Applications for change of name must be scrutinized to ensure that all the provisions of the "Change of Name Act" are complied with before a change of name is granted. Alteration of Christian names requires the consent of both parents in the form of a statutory declaration. Fraudulent registrations require a careful investigation of all evidence before cancellation can take place under the provisions of section 13 of the "Vital Statistics Act." Adoption orders are received from the Court registries of the Province. Orders are accepted, providing the adopted child was born in British Columbia, from competent Courts of jurisdiction of other Provinces and states. If the adoption occurred within the Province but the child was born outside, the Division notifies the respective state or Province of adoption, sending a photostatic copy of the order. Machinery is being set up to handle divorces in a similar manner.

Chart VI., Accounts Section.—This section handles the daily cash receipts of the central office received through mail and across the counter. In addition, it is responsible for a system of accounts, based on punch-card methods, designed to give information on expenditures of the Provincial Board of Health and its Divisions on a budget as well as a costing basis.

Chart VII., "Marriage Act" Section.—This section is concerned with the system of registration of ministers and clergymen eligible to perform marriages in the Province. The recognition of a religious denomination previously unregistered under the Act often involves considerable investigation as to the background of the organization, its present status, and its possible continuity of existence. Denominations of a "mushroom" type of growth are not registered. Once a denomination is recognized, any number of applications for registration of ministers and clergymen may be made by its governing authority. Transfers, cancellations, etc., are all included in maintaining the system. The registration of every marriage is checked to ascertain if any marriages have been performed by unregistered clergymen.

As administration of the "Marriage Act" is one of the primary responsibilities of the Division, it is therefore concerned with the qualifications of persons for marriage. Such matters as caveats, adequate proof of divorce, proof of age and consent of parents for minors, presumption of death and orders for remarriage are all included in the responsibilities of this section.

CHART V.

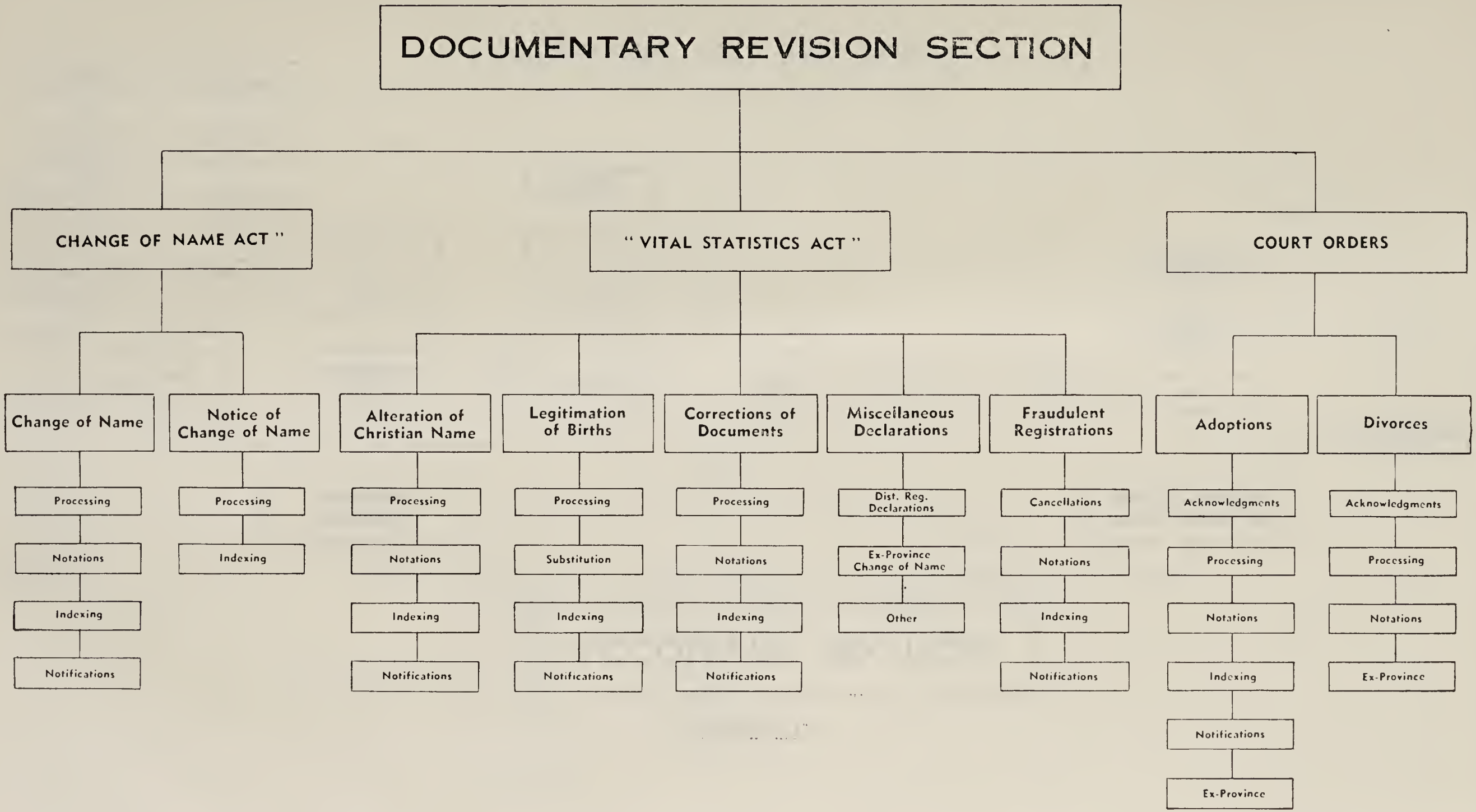

DOCUMENTARY REVISION SECTION
CHANGE OF NAME ACT"
"VITAL STATISTICS ACT"
COURT ORDERS
Change of Name
Notice of Change of Name
Alteration of Christian Name
Legitimation of Births
Corrections of Documents
Miscellaneous Declarations
Fraudulent Registrations
Adoptions
Divorces
Processing
Notations
Indexing
Notifications
Processing
Indexing
Processing
Notations
Indexing
Notifications
Processing
Substitution
Indexing
Notifications
Processing
Notations
Indexing
Notifications
Dist. Reg. Declarations
Ex-Province Change of Name
Other
Cancellations
Notations
Indexing
Notifications
Acknowledgments
Processing
Notations
Indexing
Notifications
Ex-Province
Acknowledgments
Processing
Notations
Ex-Province

CHART VI.

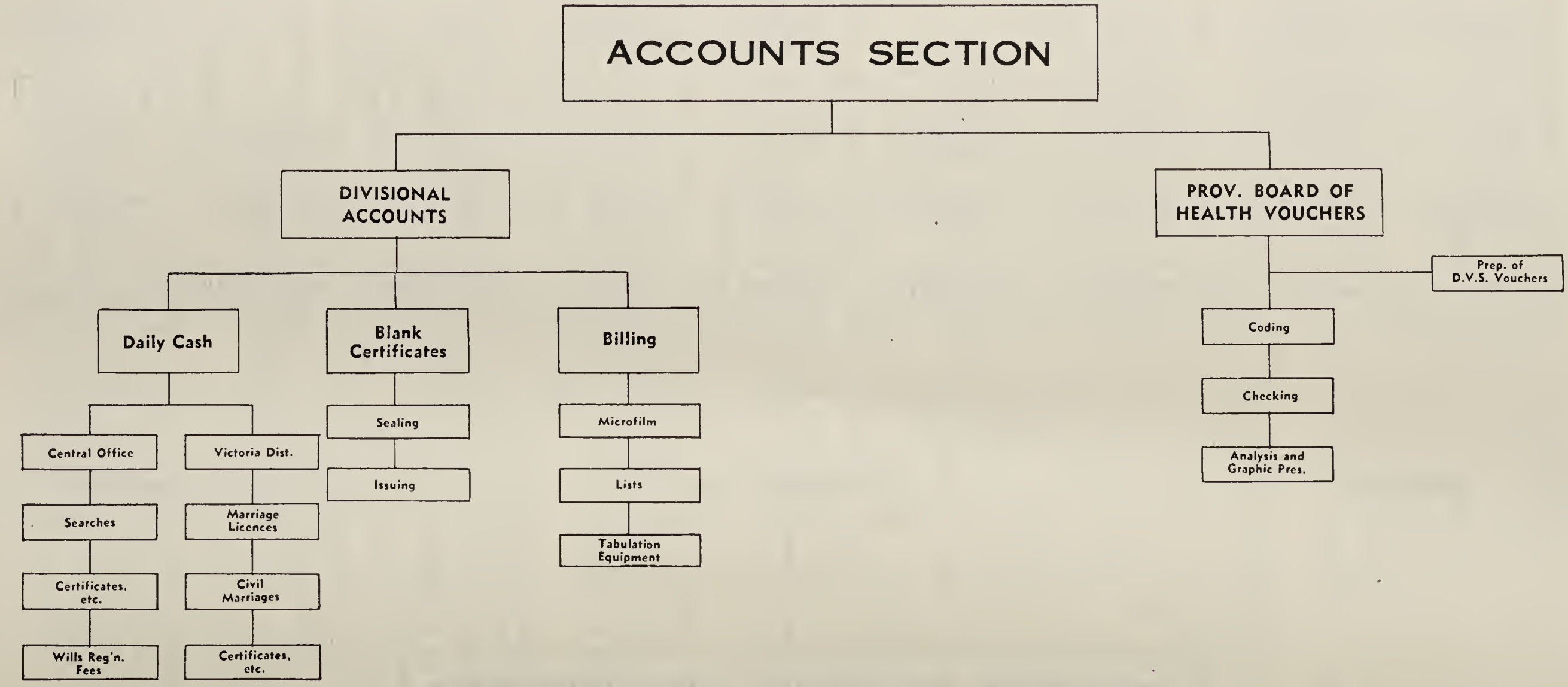

ACCOUNTS SECTION
DIVISIONAL ACCOUNTS
Daily Cash
Central Office
Searches
Certificates, etc.
Wills Reg'n. Fees
Victoria Dist.
Marriage Licences
Civil Marriages
Certificates, etc.
Blank Certificates
Sealing
Issuing
Billing
Microfilm
Lists
Tabulation Equipment
PROV. BOARD OF HEALTH VOUCHERS
Prep. of D.V.S. Vouchers
Coding
Checking
Analysis and Graphic Pres.

CHART VII.

MARRIAGE ACT SECTION

- REGISTRATION OF MINISTERS & CLERGYMEN
  - Recognition of Denomination
  - Issuance of Reg. Cert.
  - Transfers & Address Changes
  - Cancellations
  - Gazettings, etc.
  - Check for Unreg. M. & C.
- MARRIAGE
  - Qualifications for Marriage
    - Caveats
    - Divorced Persons
    - Minors
    - Presumpt. of Death
    - Remarriage
    - Premarital Blood Tests
  - Solemnization of Marriage
    - By Banns
      - Publication
      - Checking
      - Indexing
      - Filing
    - By Licence
      - Immediate
      - Regular
      - Indexing No. 3 Copies
      - Filing
    - By Civil Contract
      - Immediate
      - Regular
- MISCELLANEOUS ITEMS
  - Validations
  - Refunds
  - Marriage Registers
    - Issuance
    - Recalls for Checking

Marriages may be performed by ministers and clergymen either after the publication of banns or on the authority of a licence. A marriage can also be performed by civil contract. All notices of publication of banns are filed in the Division, where they are checked and indexed. Questions by Issuers of Marriage Licences and Marriage Commissioners are referred to this section. A number of miscellaneous functions carried out by this section include the procedures relating to validation of marriages, marriage licence refunds, etc. Marriage registers are issued to each congregation, in which all marriages must be recorded. These registers are recalled periodically for checking to locate any unregistered marriages.

Chart VIII., Statistical Section.—Besides providing the statistical information relating to births, deaths, marriages, adoptions, divorces, population, etc., this section does a considerable amount of work for the other services of the Provincial Board of Health. Communicable disease reports, Public Health Nurses' reports, medical inspection of schools reports, and population estimates are part of the work done for the Bureau of Local Health Services. The Division compiles the majority of the statistics of the Divisions of Venereal Disease Control and Tuberculosis Control. Cancer statistics are collected and analysed. Special reports or studies are made by the section from time to time on such subjects as health insurance, car operating costs, food costs for nutritional studies, etc., depending upon the requirement of the time.

As the public health programme of the Provincial Board of Health develops, so the responsibilities of this section will increase to provide the means of evaluating the progress made and to determine the needs of the future.

SUMMARY OF REGISTRATION AND RELATED PROCEDURES.

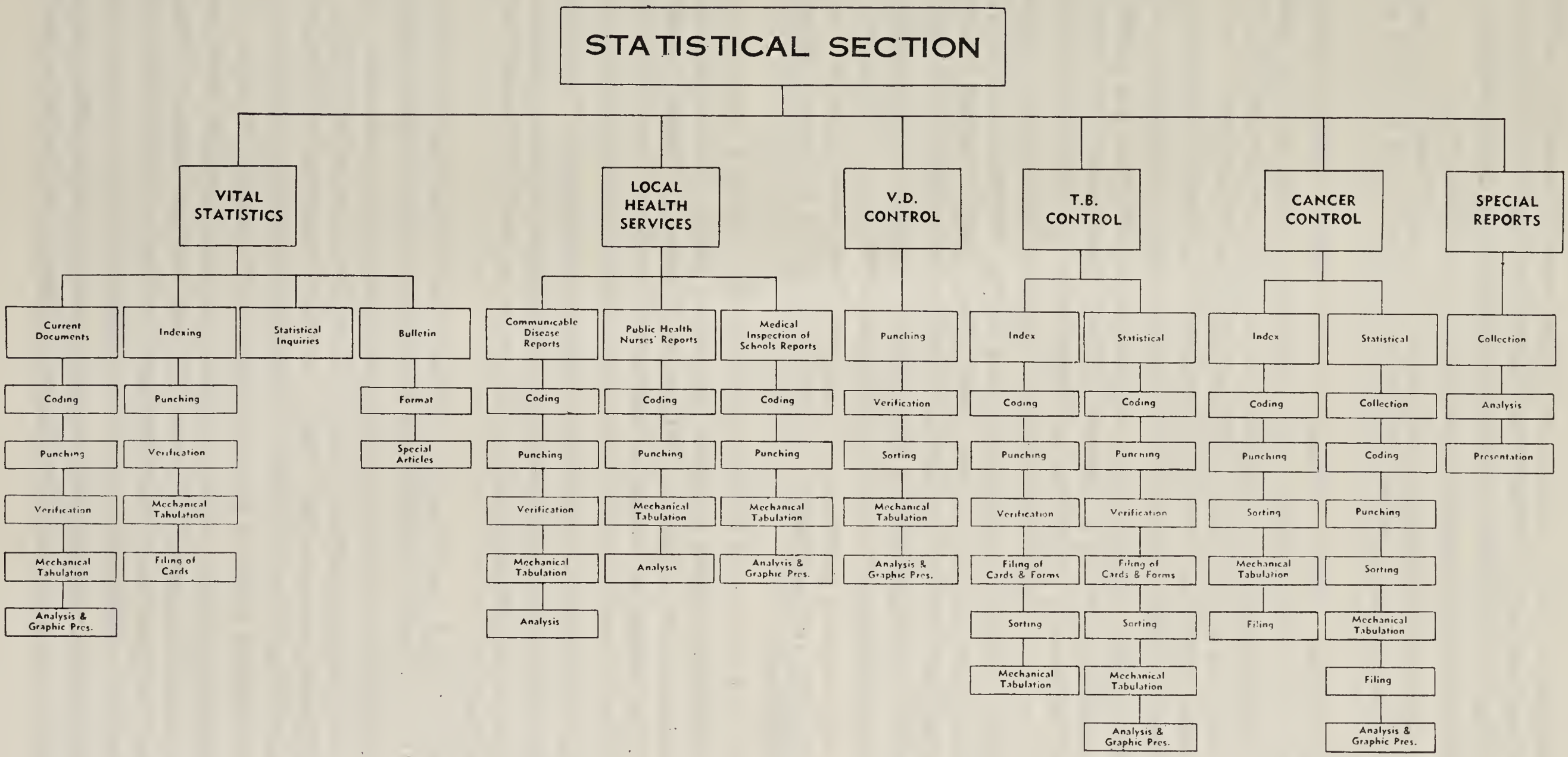
Volume of Registration.—In 1945 the volume of live-birth, still-birth, adoption, and divorce registrations each reached an all-time high. The following is a table showing the increase in total volume of registrations over a ten-year period, 1936 to 1945:—

Year.	Live Births.	Deaths.	Marriages.	Still-births.	Adoptions.*	Divorces.†	Total.
1936	11,186	7,254	5,465	236	80	463	24,684
1937	13,033	7,981	6,232	254	109	536	28,145
1938	13,812	7,455	6,158	259	134	652	28,470
1939	13,176	7,626	7,897	279	150	608	29,736
1940	15,616	8,386	9,694	280	163	687	34,826
1941	17,025	8,617	9,828	308	191	563	36,532
1942	18,346	8,916	10,905	313	157	847	39,484
1943	20,068	9,918	9,476	338	249	886	40,935
1944	19,969	9,833	8,552	321	303	1,030	40,008
1945	20,234	9,855	9,327	352	373	1,405	41,543

* Includes ex-Province adoptions of British Columbia born children. † Act in force May 1st, 1935.

The volume of birth registrations received rose over the previous high in 1943. There were 20,234 birth registrations filed, of which 1,639 were Indians within the meaning of the "Indian Act." There was also an increase in the number of persons who were granted a delayed registration of their birth in comparison with the year previous. In 1945, 1,092 such registrations were accepted, compared with 985 in 1944. Each delayed registration requires care-

CHART VIII.


STATISTICAL SECTION
VITAL STATISTICS
Current Documents
Coding
Punching
Verification
Mechanical Tabulation
Analysis & Graphic Pres.
Indexing
Punching
Verification
Mechanical Tabulation
Filing of Cards
Statistical Inquiries
Bulletin
Format
Special Articles
LOCAL HEALTH SERVICES
Communicable Disease Reports
Coding
Punching
Verification
Mechanical Tabulation
Analysis
Public Health Nurses' Reports
Coding
Punching
Mechanical Tabulation
Analysis
Medical Inspection of Schools Reports
Coding
Punching
Mechanical Tabulation
Analysis & Graphic Pres.
V.D. CONTROL
Punching
Verification
Sorting
Mechanical Tabulation
Analysis & Graphic Pres.
T.B. CONTROL
Index
Coding
Punching
Verification
Filing of Cards & Forms
Sorting
Mechanical Tabulation
Statistical
Coding
Punching
Verification
Filing of Cards & Forms
Sorting
Mechanical Tabulation
Analysis & Graphic Pres.
CANCER CONTROL
Index
Coding
Punching
Sorting
Mechanical Tabulation
Filing
Statistical
Collection
Coding
Punching
Sorting
Mechanical Tabulation
Filing
Analysis & Graphic Pres.
SPECIAL REPORTS
Collection
Analysis
Presentation

ful investigation before acceptance. The establishment of definite national standard minimum requirements for delayed registration of birth on a national basis has been of definite assistance to this Division in determining whether an application for delayed registration should be accepted or not.

The number of marriages registered increased over the number in 1944 but did not exceed the number registered during each of the first four years of the war.

Legitimation of Birth.—There were 126 births of children born out of wedlock legitimated subsequent to the marriage of their natural parents during 1945. In each case, after complete investigation by the Division, a new registration was filed showing the child as legitimate from birth.

A certain number of legitimations have occurred because of the careful documentation of the personnel of Canada's armed forces by the Dependents' Allowance Board. All details of marriages, births, etc., are carefully checked before granting payment to dependents, and hence cases where natural parents of a child previously registered as illegitimate have married, legitimation procedures have been instituted and the birth reregistered as legitimate. The annual check on children entering school for the first time also provides a means of intimating to natural parents, who subsequently married, the possibility of legitimating the birth of any offspring born prior to their marriage.

The Division has adopted the routine procedure of referring all cases of intended legitimation to the Superintendent of Child Welfare to be checked, unless both natural parents had acknowledged parentage by registering the birth promptly and by jointly signing the original document showing the child to be illegitimate.

Statutory Notations entered.—During the year 523 notations were entered upon registrations which had been previously filed. One hundred and eleven of such notations were alteration of Christian name of children under 12 years of age and the remainder were for correction of errors involving dates of birth, mis-spelling, incomplete answers to questions on the registration form, etc.

Change of Name.—Since the "Change of Name Act" was assented to on December 6th, 1940, there have been 992 changes of name granted. All applicants have to be British subjects, 21 years or over, and must be domiciled in this Province.

Section 13 of the "Change of Name Act" specifies that notice had to be filed with the Division within three months after the Act was proclaimed of any changes of name of persons resident in the Province who have changed their name in the twenty years prior to the date of enactment of the Act. Since that date 2,272 notices have been filed. In many instances certificates have been issued which have proved useful to people in helping to provide an explanation of their change of name at some date prior to December 6th, 1940. The Division has continued to receive notices of change of name because there is no limitation placed by the Act upon it in receiving such notices, although the Act made it mandatory for persons who had changed their name to file notice within a three-month period. During the year 224 notices of change of name were accepted.

Death Registrations of Overseas Casualties.—This Division has received, through the co-operation of the Dominion Bureau of Statistics and the Depart-

ment of National Defence, information on the regular death registration form of personnel of Canada's armed forces who were killed or died overseas during their period of enlistment. These registrations are collected for their statistical importance. No certificates are issued nor is there any documentation for legal purposes done from these records. The time-lag between the date of death and the time the Division receives the registration may be anywhere from at least six months to a year. There have been 2,680 such registrations received up until December 31st, 1945, of which 1,255 were received during the year under review.

Adoption Orders.—The number of adoption orders sent by the Registrars of the Supreme Court to this Division reached an all-time high of 373 for the year. This number includes 39 ex-Province adoptions of children born in British Columbia. A notation of adoption is made on each original registration showing the name of the adopted child and the names of its parents by adoption, the date of adoption, and place of adoption. Any certificate which is subsequently issued from the document is issued under the name by adoption of the child and does not give any indication of its previous status.

Decrees of Dissolution and Nullity of Marriage.—The most outstanding increase, however, is to be found in the number of copies of decrees of dissolution and nullity of marriage filed with this Division by the Registrars of the Supreme Courts. Altogether 1,405 decrees were registered during the year, of which 1,366 were divorces, 33 were nullities, 3 legal separations, and 3 dismissals.

THE CONTRIBUTION OF THE DIVISION OF VITAL STATISTICS TO CANADA'S WAR EFFORT.

The Division's contribution to the war effort was again a significant part of its duties. Despite the end of hostilities in 1945, which has led to a decrease in some phases of the work, the Division continued to give its assistance in many ways. A few of the more important items of assistance are outlined herein.

Documentation for Dependents' Allowance Board.—The Division assisted in the searching and certifying of 10,044 vital records pertaining to members of Canada's armed forces. This was a decrease over the previous year when 19,493 records were searched and certified. This decrease is due to the falling-off in enlistment and discharge of members of the armed forces. The total number of records so documented since the outbreak of war is 90,188.

Military Verification.—The number of verifications for recruiting purposes dropped from 1,087 in the year 1944 to 175 in the current year. Proof of age is a general recruiting requirement for the Air Force. Any Army recruits around the age of 17 or 18 must also supply proof of age. The decrease may largely be attributed to reduced recruiting for the Air Force during the year.

Fees waived for Military Purposes.—The Division continued to waive the statutory fees for delayed registration of birth, legitimation of birth, alteration of Christian name, and correction of documents, etc., providing such services were for military purposes. A complete report was made on each of these cases to the Dependents' Allowance Board in Ottawa. Sometimes investigations were necessary, which required considerable time and effort.

Co-operation with War-time Federal Agencies.—The Division continued to give its co-operation to the National Registration authorities, Selective Service, Wartime Prices and Trade Board, and the Department of External Affairs, whereby proof or verification is given to these bodies. Details of this kind of assistance appear in earlier annual reports.

PRESERVATION OF RECORDS.

Microfilm.—The necessity to preserve the records of the Division through the process of microfilming was outlined in detail in the report for the year 1942. As foreshadowed in last year's report, all the marriages on file in the Division were microfilmed in 1945, the births having been completed the previous year. At the end of the year a start was made on the death registrations. The replacement of typed transcripts for the Dominion Bureau of Statistics by microfilm plus a serious amount of mechanical trouble prevented completion of the deaths by the year's end. When all the vital records in the Division have been microfilmed, certificates may be typed from the film itself or positive enlargements made from the negative film. In addition, consideration is being given to the possibility of establishing a duplicate set of microfilmed records for the whole Province in the office of the District Registrar at Vancouver. As this office serves almost half of the population of the Province, such a plan would appear to be extremely worth while. Often certificates are required in a rush and this demand could be met without delay.

COMPLETENESS OF REGISTRATION.

Indians.—With the establishment of Family Allowances payable to Indians, there has been a marked increase in the number of Indian registrations. Indian Agents have been most co-operative in assisting to register the births not only of all the Indian children living on the reserve of Family Allowance age but also in registering many adults. Indian registration should not be the same problem in the future as it was in the past.

Doukhobors.—For several years past the Division had a special representative working among the Doukhobors in connection with the registration of vital statistics. The services of this representative were terminated during the year and a new approach to the problem is being worked out in conjunction with the Provincial Police.

Registration of Births.—A check on the completeness of birth registration was made by the Family Allowance Branch. Less than 1 per cent. of births were found to be unregistered. The co-operation of the physicians in sending in notifications of a live birth or still-birth has continued to be excellent in spite of the very heavy demand on their time. Hospitals, both public and private, have continued to send in most regularly and without exception their monthly returns of births. The final method of checking on birth registration—namely, a return from all schools (public, private, and elementary correspondence schools) in the Province of pupils entering school for the first time—besides bringing in a number of unregistered births, also made possible a certain number of legitimations, alteration of Christian names, correction of documents, etc.

Registration of Deaths.—The registration of deaths has not presented any fundamentally different problems in 1944 from that experienced in previous years. Some of the Coroners could be more prompt in filing death registrations.

Registration of Marriages.—Whenever a fresh marriage register is requested by a clergyman, the Division requires that the completed register be returned for checking. However, there are many marriage registers wherein only a few marriages are entered each year. Hence, in the normal course of events, these might only be checked once in ten years. Rather than delay so long in order to determine whether or not all marriages have been registered, the Division has called in during the year registers in the hands of Roman Catholic priests, Mennonites, and some in the hands of United Church clergymen. Registers in the hands of clergymen of other denominations will be called in by the Division in rotation in the future. It has not been possible to locate all the marriage registers issued many years ago. Efforts will be continued to locate these records, as undoubtedly they will contain more unregistered marriages than those issued in later years. As a result of the check on marriage registers, forty-nine delayed registrations of marriages were effected during the year under review.

DISTRICT REGISTRARS' OFFICES, ETC.

At the close of the year the Division of Vital Statistics had eighty-five district offices and fourteen sub-offices. There are nineteen Indian Agents acting as District Registrars for Indians. Some thirty district offices were inspected during the year and four Indian Agencies of the Province were also inspected. Some of these district offices had been visited very infrequently in the past. The inspections proved worth while from the standpoint both of checking on the records kept in the district offices and instructing the District Registrars and their Deputies on points in connection with their work. The Division is keenly appreciative of the co-operative attitude shown by the District Registrars and their Deputies.

The Government Agents' Conference held in the fall enabled members of the Division to meet and discuss mutual problems with these officials, who in all cases were District Registrars. In turn, they were given an opportunity to see the workings of the Division.

ADMINISTRATION OF THE "MARRIAGE ACT."

During the year five denominations applied for registration under the "Marriage Act." Three, B.C. Evangelical Mission, Khalsa Dewan Society, and the Maple Ridge Baptist Church, were recognized; one was refused. At the end of the year there were four applications pending, one carried over from the year previous. Five other applications were dropped during the year. It is not the policy of the Division to recognize any denomination of a "mushroom growth" type of organization as this does not appear to be the intent of the "Marriage Act."

LEGISLATION.

The "Marriage Act."—This Act was amended to prevent any marriages by proxy by providing that both parties should be present at the ceremony. The

amendment also removes the discrimination as to residence requirements for persons married by civil contract compared to those married by licence. With the growth of better transportation facilities, many people tend to come to the bigger centres to transact their business. Often the centre was just outside the boundaries of the registration district of residence of one of the parties to the intended marriage. Previously, at least one of the parties to a civil marriage had to reside for at least eight days in the district where the Marriage Commissioner was located. This meant that such marriages could not be performed. The amendment had the effect of broadening the residence qualifications from a district to a Provincial basis. The Act was further amended to provide that where a marriage by civil contract was performed in good faith although an irregularity might have occurred therewith, the marriage shall not become invalid because of the irregularity. This amendment gives similar protection to that previously in effect in connection with the irregular issuance of a licence.

The "Vital Statistics Act."—This Act was amended to strengthen the administrative procedures in regard to the work of the Division and to create a properly defined legal means of making agreements between the Dominion and the other Provinces.

The amendment is briefly summarized hereunder section by section:—

Section 2: Still-birth, previously undefined, was defined along with one or two other minor additions to the definition.

Section 3: Permits the Director of Vital Statistics to accept such evidence as hospital records, baptismal certificates, and other forms of proof substantiating the facts of birth in connection with applications for delayed registrations of birth. Previous to this amendment, no evidence of this nature was required by the Act.

Section 4: The time for appeal to a Judge of the Supreme Court against the refusal of the Director of Vital Statistics to register a birth was limited by the amendment to one year.

Section 5: The practice of issuing certificates of adoption under signature of the Provincial Secretary had become obsolete and, therefore, the reference to this method of certification was deleted from the Act.

Section 6: This section permits the issuance of a birth certificate in the adopted name of a child born in this Province but adopted in any country through a Court of competent jurisdiction, providing evidence of adoption is submitted to the Division.

Section 7: Before the given or Christian name of any child under 12 years of age is altered, the consent of both parents must be obtained, except under exceptional circumstances. Previously, only one parent need apply for alteration of a child's given or Christian name.

Section 8: This section permits a notation of change of name to be made on the birth registration of a child born in this Province in the event of evidence being received of a proper change of name being made in another Province.

Section 9: Introduces a proviso—*see* section 11.

Section 10: Permits the acceptance of a delayed registration of death by the Director of Vital Statistics, together with the machinery to provide an appeal to the Court against the decision of the Director. This is similar to the procedure in connection with the delayed registration of birth.

Section 11: Prior to the enactment of this section and contrary to the provisions of the " Vital Statistics Act," many deaths were registered originally in the District Registrar's office other than the office of the district where the death occurred. Strict enforcement of the Act as it stood would have caused the undertakers considerable inconvenience.

Section 12: Permits the Director to obtain additional statistical information on divorces from information in the hands of the Supreme Court Registrars.

Section 13: Permits a notation of divorces occurring in another Province to be made on the original registration of marriage on file within the Division.

Section 14: Permits the correction of an error on the registration on file in the District Registrar's office if initialed by the person who originally completed the registration, otherwise the correction will have to be made by marginal notation.

Section 15: Permits the Lieutenant-Governor in Council to authorize the period whereby returns are made from the District Registrar to the central office of the Division. As a result of this amendment, an Order in Council was passed which read as follows:—

> Commencing October 22nd, the District Registrars of Births, Deaths, and Marriages shall mail or deliver to the Director of Vital Statistics on each Monday the returns accompanied by all original registrations made by the District Registrars under the " Vital Statistics Act " during the week immediately preceding.

Section 16: The method of indexing as previously specified in the Act was obsolete and had become inoperative. Therefore, mention of it was removed from the Statutes.

Section 17: After fulfilling certain conditions, fully qualified public health officials may obtain all necessary information pertaining to vital statistics for carrying out a proper public health programme.

Section 18: This section permits the Division to issue photographic prints or photostatic copies of certificates and it gives them the same legal status as ordinary certificates issued by the Director or the District Registrars.

Section 19: This section deletes the word " monthly." An explanation for this deletion is provided by section 15.

Section 20: This section deleted any reference to verification or certification for the Department of Pensions and National Health, making possible a broader arrangement. *See* section 21.

Section 21: Permits the Provincial Secretary to enter into an agreement with other Provinces or with the Dominion in regard to vital statistics. Vital statistics records are more and more in demand for all purposes of government, and this section has been drafted to permit flexibility in making arrangements with the Dominion or the other Provinces in respect to vital statistics matters.

Section 22: No other system of registration of births, deaths, and marriages is permitted by this section.

A time may come when it will be no longer necessary for teachers to make a return of births of all children entering elementary school for the first time.

If this stage in registration is attained, there is provision whereby an Order in Council can be proclaimed ending the making of returns by the teacher.

The volume of certificates issued in the Division is so great that it is impossible for the Director of Vital Statistics to sign each one. This section of the amendment permits what has already become an established practice, that is, of printing his signature on such documents.

The "Wills Act."—This Act was amended to allow a person who has executed a will to file a notice in the Division of Vital Statistics stating where the will is situated. Upon fulfilling certain conditions, a search can be made in the files of the Division to ascertain whether or not a notice has been filed. Fees are charged both for the filing of a notice and for a search.

Following the passage of this legislation, a rule was made by the Chief Justice of the Supreme Court that before any estate was probated a search has to be made of the notices on file with this Division. The result was a greater number of searches than was anticipated by this Division at the time the legislation was passed.

"An Act respecting the Status of Children of certain Marriages."—Where a presumption of death has been obtained and a marriage has subsequently been performed and the person presumed dead is later found to be alive, the children of the persons entering into such a marriage ceremony shall for all purposes be deemed to be legitimate from the time of birth. Prior to this amendment, there was no protection for the children born of such a marriage in so far as their legitimacy was concerned.

CO-OPERATION WITHIN THE PROVINCIAL BOARD OF HEALTH AND ITS DIVISIONS.

The policy of having the Division act as an adviser on forms, codes, and statistical procedures and format of reports has been carried out in accordance with the general plan of co-ordinated effort as outlined by the Provincial Health Officer. The Division continued to render very tangible assistance to the Divisions of Tuberculosis and Venereal Disease Control respectively in the preparation, tabulation, compilation, and presentation of their monthly and annual reports. Acting in his capacity as Supervisor of Medical Records to the Provincial Board of Health, the Director of Vital Statistics checks all statistical and medical forms for duplication of data and uniformity in questions, etc.

The Division of Venereal Disease Control, following advice from the Division of Vital Statistics, streamlined its record system. The same policy was adopted which has proved so successful in connection with the records of the Division of Tuberculosis Control, namely, that the Division of Venereal Disease Control assume a greater responsibility for the compilation of its own statistics relating to patient visits, tests, etc., on a cumulative daily basis. However, data relating to individuals are coded, punched, and tabulated. Cross classifications for analytic purposes are best obtained from utilization of the punch-card method.

The Division of Vital Statistics has given assistance to the Bureau of Local Health Services of the Provincial Board of Health by supplying statis-

tical information regarding population estimates, budget estimates, etc., for both established and proposed Health Units. Statistics from the reports of the Medical Inspectors of Schools were compiled by the Division. The Division continued to assume the responsibility for the collection of statistics on the daily work of the Public Health Nurses. Considerable effort was made to stimulate the reporting of cancer cases, with a result that towards the end of the year the number of new cases reported monthly doubled. Notifiable diseases were coded and punched, and the system of recording was tested against the manual method currently in use. After a fairly exhaustive test, it was decided to use the punch-cards only for monthly and annual statistics and for special studies. The Division continued to carry on the system of costing and budget accounting on a punch-card basis for all the accounts of the Provincial Board of Health.

Considerable work was done by the Division in compiling as much relevant information as possible on the subject of health insurance. Data were compiled not only for the use of the Provincial Health Officer but also for the economic adviser to the Premier on Dominion and Provincial relations.

In June the Division obtained multilith equipment in order to do its duplicating work, using the offset process. The format of the bulletin of the Provincial Board of Health was changed in an endeavour to make it more useful. Fresh emphasis was placed on the writing of leading articles by members of the staff of the Provincial Board of Health, especially members of the Division. Its circulation was more than doubled. While it is felt that the bulletin was improved during the year, yet there is room for many changes in order that it should become a better organ for the dissemination of public health information.

It should be emphasized that only the most important work done by the Division for the Provincial Board of Health has been mentioned above. It is the duty of the Division to be the statistical workshop of public health for the Provincial Board of Health and, therefore, many small tasks of minor importance are performed by the Division.

MECHANICAL TABULATION PROBLEMS.

Many of the problems which were outlined in last year's report have been solved through the acquisition of an alphabetic tabulator and an additional sorter. Apart from this equipment, the Division also has a horizontal sorter, three alphabetical key punches, two alphabetical verifiers, and share in the part-time use of a numeric key punch. With the co-operation of the Bureau of Economics and Statistics, the transitional stage was effected smoothly so that by the end of the year the Division was in a position to handle all its work effectively and fully. A considerable back-log of alphabetical work has been built up which will take some time to complete. In the meantime, additional applications are being added as warranted. It is not too much to say that the efficiency of the Division has been greatly strengthened by the possession of this equipment and the ability to control the flow of work from beginning to end.

RELATIONS WITH THE FEDERAL GOVERNMENT.

The year under review has been a most momentous one from the standpoint of change in established procedures and developments in new relationships. An agreement was entered into between the Province and the Dominion Government regarding the creation of a National Register of Vital Records and the compilation of vital statistics. The Vital Statistics Council for Canada held its first meeting during the year. Plans were made to map future progress in vital statistics. Lastly, but certainly not least, was the assistance given by the Division to the Family Allowance Branch of the Department of National Health and Welfare. It may be anticipated that vital statistics in Canada will take a great stride forward in the next few years as a result of the decisions and changes that were made during the year 1944.

The agreement in effect called for the creation of a national register of vital statistics records by means of microfilming the vital statistics records of each Province monthly and sending a microphotographic copy of each registration to the Dominion Bureau of Statistics in place of typed transcript. The agreement signed by this Province is essentially the same as that signed by all the other Provinces, with the exception of section 17, which limits the use of verification on the part of the Federal Government to Family Allowance purposes only. The basic equipment was supplied to all Provinces by the Dominion. As this Province already had a microfilm camera, it was decided to transfer the old machine to another department and to carry on with new equipment. A Vital Statistics Council, made up of one representative of each Province and one from the Yukon and the North-west Territories and three representatives of the Dominion Bureau of Statistics, including the Dominion Statistician, the Chief of the Vital Statistics Branch, and the Chief of the Census Branch, was established forthwith. The purpose of the Council is to discuss and advise on problems arising out of the administration of the vital records system and relative statistics.

The following are the terms of the agreement regarding the creation of a National Register of Vital Records and the compilation of vital statistics signed by the Provincial Secretary on the 22nd day of December, 1944:—

CANADA.

THE GOVERNMENT OF THE DOMINION AND THE GOVERNMENTS OF THE PROVINCES.

AGREEMENT REGARDING THE CREATION OF A NATIONAL REGISTER OF VITAL RECORDS AND THE COMPILATION OF VITAL STATISTICS.

For the purpose of co-ordinating and improving the efficiency of the national system of Vital Records and Vital Statistics in relation to the prospective social security measures and for other purposes, a conference between officers of the Dominion Bureau of Statistics and the Dominion Treasury, the Dominion Council of Health and representatives of the Provincial Vital Statistics offices, was held in Ottawa on September 28th, 1944, at which time an agreement was reached in principle along the lines set forth below:

1. In order to facilitate co-operation between Dominion and Provincial Governments with respect to the use of vital records and statistics and to ensure the creation and maintenance of a system that is adequate to meet increasing demands both for Dominion and Provincial

purposes, there shall be established a Vital Statistics Council for Canada under the terms set forth in Appendix "A."

2. In order to modernize the system of Vital Records and Statistics of the Dominion and the Provinces and in order to provide information now necessary for various Dominion and Provincial purposes, the procedure specified in Regulation 1, P.C. 693, dated 22nd day of April, 1919, which provided that—

> " the Dominion Bureau of Statistics may receive transcripts or certified copies of the original returns of marriages, births and deaths made by the clergymen, physicians, undertakers and other persons upon whom it is incumbent to make such returns "

be changed and the following procedure substituted therefor.

Records as from July 1st, 1945.

3. As and from the first day of July, 1945, in place of the present transcripts, the Provinces will supply, each month or oftener if possible, to the Dominion Bureau of Statistics, photographic copies of all registrations of births, stillbirths, marriages and deaths occurring in the preceding month or since the copies were previously supplied. These copies will be in positive microfile form, subject to the alternative mentioned in Regulation 19.

4. The microfilm copies shall be used by the Dominion Bureau of Statistics to create a National Register of Vital Records and continue to be used by the Dominion Bureau of Statistics for the purposes of statistical analysis under the terms of the agreement between the Dominion and the Provinces as set forth in P.C. 693.

5. In order to assist the Provinces in carrying out the responsibilities which they agree to assume under Regulation 3, the Dominion Bureau of Statistics will purchase outright and turn over to each Province, free of charge, one Recordak Model " C1 " Microfilm Camera and one translucent screen Film Reader, Model " C."

6. The Provinces will be given outright ownership of the camera equipment aforesaid, but should a Province require additional readers or enlargement equipment for its own purposes, such equipment shall be purchased at the expense of that Province.

7. The Dominion Bureau of Statistics will pay to each Province for each microfilm image of a registration of birth, stillbirth, marriage or death subsequent to July 1st, 1945, an amount to be agreed to by the Provinces and the Dominion following the recommendations of the Vital Statistics Council, it being understood that if the figure agreed upon as the basis for such payment exceeds the actual cost of preparing the microfilm images, the excess shall be applied to improving the vital statistics records of the Provinces.

8. The Provinces will guarantee priority in the use of the camera equipment for the filming of the vital records each month or at other stated periods as may be agreed upon from time to time, and each Province will be permitted to use the camera and reader for its own purposes during idle time.

9. The Provinces will purchase at their own expense the necessary microfilm each month for photographing the registrations after July 1st, 1945.

10. The Dominion Bureau of Statistics will provide the initial technical instruction in the use of the microfilm cameras.

Records prior to July 1st, 1945.

11. The Provinces agree that, in respect of any vital records filed in a Province prior to July 1st, 1945, which may be required in the creation of the National Register of Vital Records, such records shall be microfilmed at the expense of the Dominion, for the purposes of the National Register using the equipment mentioned in Regulation 5.

12. In order to provide a basis for the introduction of the National Register of Vital Records, all births registered within the Provinces from January 1st, 1925, to June 30th, 1945, shall be photographed forthwith and the negative films or duplicate positives forwarded immediately to the Dominion Bureau of Statistics.

13. The Dominion Bureau of Statistics shall prepare Hollerith cards from the negative films of the birth registrations from January 1st, 1925, to June 30th, 1945, and from such cards shall prepare lists by year of birth in alphabetical order.

14. The said lists of the births for each Province shall be sent, in the first instance, to a representative of the Dominion Government in that Province to be designated by the Dominion Bureau of Statistics.

15. Such designated officer of the Dominion Government may use the lists of births to verify such births and he shall indicate on the said lists those births that have been verified for a particular purpose.

16. Such officer, after using such lists of births prior to July 1st, 1945, shall turn the lists over to the Vital Statistics office of the Province.

General Provisions.

17. The National Register shall be used by the respective governments for the purposes of verification of Family Allowances and statistics only. Any further use shall be approved by each Province in respect to its part of the records in the National Register after recommendation by the National Council of Vital Statistics for Canada.

18. The microfilm copies and any indices compiled therefrom shall be subject to the same restrictions as imposed by the Secrecy clauses of the " Statistics Act " of the Dominion, except in such cases as may be determined by the said Council from time to time, and upon authorization from a Provincial Government in respect to its own records.

19. As an alternative to the Provinces supplying to the Dominion Bureau of Statistics the positive microfilm copies referred to in Regulation 3, the Provinces may supply the negative films. In either case the Government of the Dominion of Canada will guarantee that they will be kept under fire-proof conditions, and that should the Provincial records be destroyed or damaged at any time they will be replaced by the Dominion Bureau of Statistics at the expense of the Dominion.

20. The Dominion Bureau of Statistics shall be the sole custodian of the microfilm copies furnished to the Dominion and the National Register of Vital Records created under the terms of the said agreement except as herein provided in Regulations 14 to 16, in connection with the births registered in the Province from January 1st, 1925, to June 30th, 1945, or as may be determined from time to time by the Vital Statistics Council.

21. In the event that any one of the Provinces or the Dominion is dissatisfied with the foregoing provisions of the agreement, at least one year's notice in writing to the other party shall be given before such agreement can be terminated.

Dated at Victoria, in the Province of British Columbia, this 22nd day of December, 1944.

(Signed) Geo. S. Pearson,
Provincial Secretary.

APPENDIX "A."

Constitution of Vital Statistics Council for Canada.

For the purpose of carrying out and giving effect to the provisions of the " Statistics Act " of the Dominion, in connection with securing uniform methods of collecting, compiling and publishing the Vital Statistics of Canada and the Provinces, and other matters related thereto, under an agreement with the Provinces and the Dominion, agreed to at a conference between officers of the Dominion Bureau of Statistics and the Dominion Treasury, the Dominion Council of Health and representatives of the Provincial Vital Statistics offices, held in Ottawa on September 28th, 1944, the Minister of Trade and Commerce, pursuant to Section 9 of the said Act, does hereby constitute a Vital Statistics Council for Canada under the following terms:

1. That there shall be established a Vital Statistics Council for Canada comprising one representative for each Province (the officer actively in charge of the Provincial Vital Statistics office), one representative for Yukon and the Northwest Territories (to be designated by the Minister of Mines and Resources) and the Chief of Vital Statistics in the Dominion Bureau of Statistics.

2. That the Chairman of the Council shall be the Dominion Statistician and the Vice-Chairman shall be elected annually from the representatives of the Provinces, and Yukon and the Northwest Territories.

3. That the Secretary shall be a member of the Council and shall be appointed for a term to be determined by the Council.

4. That the Vital Statistics Council shall meet at least once a year for purpose of discussing and advising on problems arising out of the administration of the Vital Records system and relative statistics.

5. That the expenses of the Vital Statistics Council shall be borne jointly by the Dominion and the Provinces on the following basis:

(*a.*) By the Dominion, transportation expenses of all Council members to and from the place of meeting and other expenses incidental to the meeting; and

(*b.*) By the Provinces, the living expenses of the respective Provincial Council members while at the place of meeting.

The system of mechanization of vital statistics registrations considered by the Vital Statistics Council was designed to meet the following broad objective:—

(*a.*) The linking of vital records of births, still-births, legitimations, change of name, adoption, marriage, dissolution, immigration, emigration, and death.

(*b.*) A system of numerical identification of the individual and of the family, based on registrations of vital records which would be acceptable to and used in preference to other systems by all official Dominion and Provincial agencies.

The mechanics of the system required in order to accomplish the above consist of microfilm records of the Provincial registrations and the use of punch-cards and all electrical tabulating equipment. The system of numerical identification proposed to the Council is (*a*) the birth registration number for the individual and (*b*) the marriage registration number for the family.

Both of these numerical identifications would have the number of the Province of event as a prefix and the last two figures of the year as an affix. This system of identification is both basic and permanent and permits of the limitless use of linking the events of life. It is suggested that a uniform punch-card be drafted for the national index, on which would be punched births, still-births, change of name, adoption, marriage, dissolution, immigration, emigration, and death. The birth registration numerical identification will be punched on all cards covering all events. The marriage registration numerical identification will be punched on all birth cards to serve as a family identification. This combination of identification will permit of bringing all events of life together on an individual or family basis. Further, it was suggested that the registrations should be sent in weekly from the District Registrars' offices. After careful checking, the completed registrations should be numbered and microfilmed according to a procedure common to all Provinces. Members of the Council were asked to make a detailed study of the recommended procedures in connection with the establishment and maintenance of the National Register of Vital Records. It is anticipated that this Province will co-operate fully in this matter.

Several resolutions were passed by the Council, including one recommending to the Dominion Bureau of Statistics that tabulations of published vital statistics data should include municipalities. At present, cities, towns, and villages only are included, although some urban municipalities are larger than certain small cities.

The coming into operation of the "Family Allowance Act" on July 1st has meant much to the Division. In the first place, the Division had a gap of unpunched birth index-cards between 1928 and 1935 to complete punching. An extra shift was put on for a few weeks and the work finished on time. All the birth index punch-cards from 1925 to June 30th, 1944, were sorted into proper sequence and sent to Vancouver for reproduction. The reproduced cards were then sent to the Dominion Bureau of Statistics at Ottawa where an alphabetic index was prepared and sent to the Family Allowance Branch.

All applications for Family Allowance were checked against this index, and any births not located were referred to this Division to be checked in the indexes. Differences were noted on the application for search forms received from the Family Allowance Branch if the particulars thereon were different from those appearing on the registration. If a birth could not be located after a careful check, the Family Allowance Branch notified the applicant for allowance advising her to contact this Division, a copy of the letter being sent to this office. As a result, a number of applications for delayed registration of birth have been made. In many instances it was found that the birth had occurred in another Province, or that a mistake had been made in the date of birth, or that the name on the application had been changed either by adoption of a foster surname or sometimes by anglicizing a foreign-sounding surname. A list of children whose names had been changed by other than legal procedures was sent to the Child Welfare Branch for its use in locating children whose whereabouts were temporarily unknown. A preliminary check would indicate that less than 0.5 per cent. of all births were unregistered. It should be noted that Family Allowances, apart from causing a considerable amount of work, have been of advantage to the Division in ensuring more complete and accurate registration of birth. It can also be stated that there has been full co-operation between the staff of the Family Allowance Branch and the personnel of the Division.

PROBLEMS OUTSTANDING AT THE END OF THE YEAR.

Goal in Registration.—The first and perhaps most fundamental problem of the Division is to have a complete registration of all births, deaths, and marriages. In this connection, Doukhobor registration is the largest single problem. Improvement of returns from Indian Agents is also necessary. Marriage registers issued years ago must be traced in order to locate any unregistered marriages.

If rationing ends during the forthcoming year, an incentive to prompt birth registration will be lost. At the present time, birth certificates are required to obtain a ration book for a new-born infant. With the elimination of rationing, registration officials will have to be prompt and persistent in their efforts to obtain all registrations as soon as possible.

Standards for Correction of Documents, Legitimation Procedures, etc.—To date there are no national standards for the above procedures. Each Province has its own rules. Creation of a standard of acceptance on a Dominion-wide basis is highly desirable. An effort will be made by the Division to promote the adoption of these standards by all Provinces.

Instruction Manuals.—Practically no progress was made on the preparation of the District Registrar's Manual. With the release of service personnel, it is anticipated that there will be staff available in the coming year to complete this manual. It will be followed up by a manual of instructions on central office procedures. Rules for searching, detailed outlines of duties, etc., must be prepared.

Plasticized Birth Certificates.—Another problem to be met in the forthcoming year will be the introduction to the public of tamper-proof pocket-book size birth certificates. They will be in the nature of a birth card placed between strips of plastic and laminated together under heat and pressure. It is expected that the other Provinces of the Dominion will introduce similar miniature certificates at approximately the same time. If the experience of several of the State Vital Statistics Divisions is any criterion, there should be quite a demand for these certificates.

Development of further Services to the Provincial Board of Health.—Many of the same problems outlined in last year's report under this heading are still existent. Before sound programmes can be initiated by the Bureau of Local Health Services respecting the growth of public health measures in local communities, it is necessary to obtain all pertinent data relating to each community. It is the function of the Division of Vital Statistics to supply as much of the needed information as required. Data relating to estimates of population and birth and mortality statistics of all kinds are usually requested from the Division. With the development of a Province-wide system of Health Units, the Division will be expected to give a more extensive consulting service regarding records and statistics. Doubtless some of the boundaries of the present vital statistics registration districts will have to be changed to conform with Health Unit boundaries so that vital statistics can be collected for these Units.

General Remarks.—Problems are bound to arise due to the changes in the Province from a war to a peace time economy. Certificates will not be needed for war-time official purposes, but undoubtedly a greater demand will arise from travel requirements, possible contributory old-age pensions, proof of age for sports eligibility, etc.

New problems will be met in connection with the creation of the National Register of Vital Records which will require the full co-operation of each Provincial vital statistics office. In addition, many staff changes are bound to occur, such as the proper placement of those members of the staff returning from military service to clerical duties on the one hand and, on the other hand, the replacement of married women who are mainly stenographers and typists.

However, the experience of the past indicates that a splendid spirit of co-operation exists among the staff, which will do much to successfully solve the many and varied problems ahead.

REPORT OF THE DIVISION OF LABORATORIES.

C. E. Dolman, M.B., B.S., M.R.C.P., D.P.H., Ph.D., Director.

INTRODUCTORY COMMENTS.

During the year the main laboratories in Vancouver performed the extraordinary total of a quarter of a million tests, an increase of roughly 25 per cent. over the previous year's total and double the turnover for 1940. In the last few months of the year an average of nearly 25,000 tests was performed monthly or approximately half the total 1935 turnover. Thus the laboratories trebled their turnover in the first five-year period of the present Director's incumbency, 1935–40, and doubled this again in the second five-year period. Apart from this sixfold increase in routine tests during a single decade, the central laboratories have also assumed heavy additional responsibilities in supervising the work of the six branch laboratories, in releasing biological products for distribution throughout the Province, and, during the war years, in undertaking the laboratory aspects of the Red Cross blood donor project for British Columbia.

To cope with this unusually rapid expansion in the scope and quantity of work, the staff and budget of the central laboratories has more than trebled while the available accommodation has nearly trebled during the past decade. But these enlarging facilities have at no time kept pace with the demands made upon them. Indeed, it was pointed out in last year's annual report that no reasonable possibilities existed for further additions to the present quarters, while the staff had about reached the maximum number which could be housed there. The markedly increased load of 1945 was only just manageable because of an early reduction, and subsequent cancellation, of the laboratories' commitments to the Red Cross blood donor service. This released the ground floors of two houses, previously required solely for the Red Cross work, and permitted a long overdue rearrangement of space affecting especially such basic services as glassware cleaning and media preparation.

Among the branch laboratories, those at Victoria and Nelson showed substantial increases in turnover. The Victoria laboratory at the Royal Jubilee Hospital deserves special praise for having successfully met numerous emergency demands despite critical shortages of trained staff.

TESTS RELATING TO VENEREAL DISEASE CONTROL.

The various tests concerned with diagnosis and control of syphilis and gonorrhœa have always represented roughly two-thirds of all examinations made by the Division. In 1945 this proportion rose to about four-fifths, largely because of the undertaking to perform serodiagnostic tests for syphilis on every person discharged from the armed forces, and to a lesser extent because of the increased incidence of venereal disease. That the central laboratories during the year should have tested for syphilis over 120,000 separate blood specimens, and the Division as a whole over 150,000 such specimens, certainly indicates that this Division has continued to make an indispensable contribution toward the control of this disease in British Columbia. More than one-quarter of the total blood specimens examined by the Division were from men enlisting in, or discharged from, the armed forces. During the first eleven months of 1945 the

central laboratories tested nearly 25,000 specimens from the Canadian Army alone, and during the first ten months nearly 15,000 from the R.C.A.F. From both branches of the armed forces, 15 cents per specimen was received for this work. In view of the increasing percentage of specimens giving positive or doubtful reactions with the presumptive Kahn test, and therefore requiring supplemental tests, it seems unlikely that these payments covered the cost. However, it would seem reasonable that a small share of the cost should be borne by the Province, in view of the close relationship between the civilian and military incidence of syphilis.

One of the most direct indications of an increasing local prevalence of syphilis is to be found in an almost doubled number of dark-field examinations performed during 1945 as compared with the previous year. A disconcertingly high proportion of these specimens were positive for *Tr. pallidum*.

The widespread assumption that gonorrhœa has also increased in prevalence seems likewise borne out by laboratory findings. Substantially greater numbers of direct microscopic examinations of smears for gonococci were made. The comments made in recent annual reports on the significance of this trend, and on the increasing difficulties encountered in this branch of the laboratories' work, are still applicable. A definite start was made upon attempts to improve the sensitivity and specificity of gonococcus culture techniques. The comparative advantages of the serumlysed blood medium recently described by Peizer, and of the chocolate agar medium hitherto used, were investigated by Miss Chang, who, along with Miss Kerr and through the co-operation of the Division of Venereal Disease Control, spent several hours weekly during October and November at the Vancouver clinic plating specimens directly on these media so that errors due to faulty plating technique might be reduced to a minimum. No definite conclusions have yet been reached as to the respective merits of these two media.

TESTS RELATING TO TUBERCULOSIS CONTROL.

All types of tests for *M. tuberculosis* again showed an increase. The increase in direct microscopic examinations was comparatively slight but was from 15 to 20 per cent. in the much more time-consuming cultures and guinea-pig inoculations. Larger numbers of stomach-washings were received. As in previous years, difficulties were experienced in the supply and maintenance of guinea-pigs. The supply situation improved after the first half of the year as the labour situation eased, with the release of personnel from the armed forces. But the need to maintain a larger pig colony in order to cope with increased demands for animal inoculation tests multiplied the already serious difficulties incidental to the unsuitable construction and location of the buildings, the inadequate heating arrangements, and the impossibility of rendering them rodent-proof. Despite installation of new tiers of metal cages and the care given to feeding and cleaning the animals by Mr. Page, the full-time janitor appointed during the year, some individual pigs died inexplicably, and at least one major outbreak occurred of an unidentified and fatal infection.

TESTS RELATING TO CONTROL OF INTESTINAL INFECTIONS.

As foretold in previous reports, the incidence of infections due to organisms of the Salmonella-Shigella groups continued to rise. Most of these infections occurred as small family outbreaks or as sporadic cases without obvious history of source. There were also numerous instances of apparent food poisoning, some involving quite large groups, in which the symptomatology suggested Salmonella infection, but no laboratory confirmation could be obtained.

Failure to identify the cause of food-poisoning outbreaks is a common characteristic, and is usually due to a combination of such circumstances as inadequate, inaccurate, or belated sampling of the foodstuffs involved, and omission to submit promptly fæces specimens from the victims. Many of these transitory outbreaks of gastro-enteritis were doubtless due to staphylococcal food poisoning, and laboratory evidence confirmatory of this was quite often obtained. But to a greater degree than in any previous year, the prevalent food-poisoning syndrome was apt to have an incubation period of ten to fifteen hours after consumption of the incriminated meal—too long for staphylococcal food poisoning—while diarrhœa and cramps, rather than vomiting, were conspicuous.

Contacts of cases involved in the foregoing episodes were found to be healthy carriers of Salmonella organisms, with sufficient frequency to suggest that the time has come when the routine laboratory examinations of all food-handlers in public eating-places is desirable, and should be instituted throughout the Province so far as laboratory facilities permit. Since stool cultures, and not blood agglutination tests, provide the only satisfactory means of identifying these carriers, the extent to which such examinations of food-handlers could be conducted would be delimited by the facilities available at the main laboratories in Vancouver and at the Victoria branch laboratory, which are alone at present equipped for the proper performance of stool cultures.

As yet no very large-scale disaster, such as a milk- or water-borne outbreak of Salmonella-Shigella infection (typhoid and paratyphoid-like fevers and bacillary dysentery), has occurred in British Columbia, although the Vernon typhoid-fever outbreak in 1943–44 was serious enough. But with every passing year the accumulating reservoir of carriers of these infections presents a growing menace to any community in which unpasteurized milk and unchlorinated water is distributed. Sooner or later disaster will befall any community which spurns these proven and elementary safeguards of the public health. The reality of the hazard which would exist if chlorination were withdrawn in Vancouver was dramatically illustrated in the laboratories late in November. A fæces specimen, collected in the course of a routine check-up by the City Health Department from an employee of the Greater Vancouver Water Board, yielded *Salmonella typhi murium*. The man had been working around the Seymour and Coquitlam intakes at about the time of an attack of gastro-enteritis, which he had suffered a week or so before the examination was made. Two fellow-workmen had been similarly afflicted. No matter what regulations may be imposed upon Water Board employees respecting sanitary disposal of their excreta, chlorination offers the only guarantee against epidemics due to pollution of drinking-water

supplies by such means as the above. Moreover, the established transmissibility of *S. typhi murium* infection to and by rodents points to another possible mechanism of pollution against which sanitary regulations covering excreta-disposal are powerless. During the last two years nearly 250 cases and carriers of Salmonella-Shigella organisms have been identified in the laboratories among persons resident or hospitalized in Vancouver. This figure may serve to emphasize the extent of the hazards against which this growing city needs protection by continuing to chlorinate its drinking-water.

S. typhi murium was the type of Salmonella most frequently isolated by stool culture during the year in Vancouver. Infection therewith carries a mortality rate of 4 to 5 per cent., and in 1945 at least two deaths occurred from this organism in Vancouver. The Flexner dysentery bacillus, *S. paratyphi B.*, and *S. newport* were the next most frequently identified. *S. typhi* itself was encountered a few times, chiefly in specimens from the Essondale Mental Hospital. One or two rare types, notably *S. madelia* and *S. oregon*, were isolated from cases in Vancouver. The former of these, isolated from four human cases of Salmonellosis, one of which was fatal, had not previously been known as a human pathogen. It was originally isolated from birds. All final identifications of Salmonella cultures were carried out by Dr. L. E. Ranta in the Western Division of Connaught Laboratories at the University of British Columbia, which is the only Canadian centre for complete Salmonella typing.

OTHER TYPES OF LABORATORY TESTS.

A slight increase occurred in the numbers of milk samples submitted to bacterial counts and coli-ærogenes tests. More important, there was a 15-per-cent. increase in the number of phosphatase tests. A rather disturbing percentage of these tests showed evidence of faulty pasteurization, particularly among specimens from dairies operating outside Vancouver. This points to a real need for a more extensive and intensive inspection service for pasteurizing plants. In few fields of public health laboratory-work is it so important that proper arrangements should be in force for interpretation and follow-up of the laboratory findings.

The number of water samples examined bacteriologically in the main laboratories underwent a small decrease. This largely reflects the somewhat lesser number of specimens received from various collecting-points in the Greater Vancouver area. Since chlorination was instituted just over two years ago, the Water Board has maintained its own laboratory, and conducts a fairly rigid bacteriological scrutiny of the water at the various intakes prior to chlorination. This practice has permitted the Provincial Laboratories to confine its examinations to the treated water, as delivered to the consumer. It is a notable testimony to the value of chlorination of our water-supply that since this procedure was instituted about two years ago, the coli-ærogenes type of organism has been detected in only 20 among over 6,000 standard 10-c.c. amounts of water tested—a rate of about 0.3 per cent. positive samples. Previously, at some seasons, up to 100 per cent. of such samples were positive. Indeed, coliform organisms were often found in 1-c.c. and occasionally in 0.1-c.c. amounts of water under test. Charts based on the Water Board's own laboratory findings on samples collected at the intakes before treatment show that up to the present

time the Greater Vancouver water-supply fails by a considerable margin to meet internationally accepted standards, and hence is unsafe without treatment.

While certain branch laboratories managed to increase the number of their milk and water examinations, there is need of better control of the Province's milk and water supplies. The Division of Laboratories is doing its part in supplying the necessary data for action. A travelling laboratory would help greatly to solve some of the difficulties now encountered in shipping samples from a distance.

Cultures for *C. diphtheriæ* remained about unchanged in total number for the year but increased markedly during the last few months. This trend probably reflected a higher local incidence of the disease, due in part to overcrowding and other war-time and post-war conditions favouring droplet-borne infection, and in part to the return to Canada of men discharged from the armed forces in Europe and of former prisoners of war from the Far East. Virulent forms of diphtheria have been rampant in Holland and Japan during the war, and it will be surprising if sporadic outbreaks of diphtheria do not occur among the civilian population brought into contact with these returned men. The extent of artificial immunization with diphtheria toxoid among the pre-school, school-child, and adult groups in this Province is still inadequate to ensure freedom from scattered outbreaks, despite the very liberal and efficient arrangements for free distribution of biological products now operating under this Division's control.

The importance of the laboratory in the field of diphtheria-control is exemplified by the fact that in early December six carriers of virulent *C. diphtheriæ* were detected in one Vancouver family, from whom to date about two dozen cases of diphtheria have been directly and indirectly acquired. The laboratories are indebted to Dr. E. T. Bynoe, Bacteriologist in the Laboratory of Hygiene at Ottawa, for undertaking to perform the new serological typing test upon *gravis* strains of *C. diphtheriæ* isolated in Vancouver and forwarded to him. This new method appears of considerable potential value to the epidemiologist.

The only other type of test requiring any special comment would seem to be microscopic examinations for intestinal parasites. These examinations more than doubled in number during the year, and it seems probable that requisitions for such examinations, especially for *E. histolytica* (the causal parasite of amœbic dysentery), will increase still more in future. Members of the armed forces returning from overseas, particularly from Italy and the Far East, are liable also to have contracted malaria, hookworm, and other tropical or subtropical diseases. Addition of a trained parasitologist to the staff may prove very desirable in the not distant future.

RED CROSS BLOOD DONOR SERVICE.

The heavy casualties resulting from the fierce fighting in Europe in the first few months of the year seriously depleted the armed forces' available reserves of blood fluids, and necessitated strenuous efforts to meet the expanded quota of 45,000 donations set for this Province for 1945. Previous reports have described the difficulties and improvisations of staff and equipment which had to be met from the beginning of this war-time undertaking of the laboratories, and there would be no point in repetition. It need only be said that the problems tended

to increase as the war in Europe drew to an end. Donor interest slackened, so that the amounts of blood reaching the laboratories were more unpredictable than ever; the help received from volunteers was no longer as dependable; the salaried Red Cross staff attached to the laboratories felt they should seek more secure employment; and, finally, circumstances did not make for settled policies on the part of Red Cross headquarters.

After V-E Day the weekly quota of donors was halved, and when members of the Red Cross staff resigned, replacements were not made. Immediately after V-J Day the blood donor clinics were closed. By the end of September, Red Cross glassware and apparatus was all cleaned, packed, and returned to its owners, while the staff had either been discharged or transferred to the Division of Laboratories. The extraordinarily onerous chapter in the history of the laboratories' activities, which thus ended, is believed to represent a fine contribution to the war effort. In the three and one-half years of operation, the laboratories handled about 80,000 blood donations and shipped to Toronto for final processing nearly 3,000 4-litre bottles, or approximately 2,500 gallons of blood serum. This amount would furnish nearly 50,000 transfusions, a high proportion of which could no doubt be looked upon as life-saving.

Up to the end, Vancouver's record for low percentage of contaminated serum remained unapproached throughout Canada. This remarkable achievement can not be ascribed to excellence of equipment or to well-designed accommodation, but rather to careful supervision and to the policy of using only fully trained personnel for technical procedures. The Director takes pleasure in recording his appreciation of the invaluable help received from so many people in this effort, most of it given voluntarily. Special thanks are due to Miss M. Malcolm, Senior Bacteriologist, who remained in charge throughout; to several other members of the laboratories' staff who faithfully returned one or more nights each week to keep late hours on blood donor work; and to a long list of citizens in all walks of life who gave up their time to wrapping corks, cleaning needles, plugging tubes, and other tedious and unglamorous aspects of a vital project. Perhaps it may be appropriately added here that from the beginning the Provincial Government of British Columbia met without hesitation the costs of providing such accommodation as was available and could be adapted for the purpose, and also furnished, without expense to the Canadian Red Cross Society, all the items of major equipment necessary for the work, with the exception of three centrifuges.

GENERAL COMMENTS.

Staff changes during the year were again numerous. Mrs. Janet Hardy, Bacteriologist, left after five years' service; Mrs. Florence Sully, Miss Margaret Buller, and Miss Ruth DesBrisay, Assistant Bacteriologists, also resigned; and we were particularly sorry to lose Mrs. D. M. Jefferson, glassware-cleaner and outfits-maker, who retired on superannuation after serving the Vancouver laboratories faithfully for fourteen years, in fact since the Division was created.

Newcomers to be welcomed were Mrs. M. Jackson, Miss K. McLeod, and Miss M. Gurvitz, Assistant Bacteriologists; Mrs. E. Wilson and Miss V. Baillie, Laboratory Assistants; Mrs. M. Martin and Mrs. F. Page, cleaners; and Mr. H. Page, janitor. Several others were taken on as temporary Assistant Bacterio-

logists, mostly for summer holiday relief, including Miss M. Roblin, Miss A. Leith, and Miss E. Lotzker.

For these frequent staff changes, the war has been primarily responsible both by imposing uncontrollable burdens upon the laboratories and by aggravating the matrimonial and other causes of restlessness among the staff. Most of the younger women recruited during the war years accepted positions with the intention of working only for the duration. Certainly the future interests of the Division now require the recruitment of two or three senior staff members, possibly male. The necessary further reorganization of the whole Division must await the provision of proper accommodation.

Release of the ground-floor space of two houses used for the Red Cross blood-work during the war gave opportunity for a long overdue consolidation and expansion of facilities for the glassware cleaning and sterilizing, outfits-making, and media preparation departments. A few structural alterations permitted these basic activities to be carried out in close proximity to the necessary autoclave, hot-air ovens, sinks, and refrigerators. The three small "sterile" rooms which had been specially fitted up for serum separation and pooling under the Red Cross blood donor service were readily adapted to media preparation. These activities were all placed under the direction of Miss Malcolm, Senior Bacteriologist, who so successfully co-ordinated, in the same quarters, a similar assortment of Red Cross activities. This rearrangement of space also allowed two extra rooms to be transferred to the department for serodiagnosis of syphilis. A staff of nine persons, under the conscientious supervision of Miss E. M. Allan, had previously been confined to two rooms only. The situation as regards total space available may thus be defined as perhaps more satisfactory than it has been for years. However, all that has been stated in previous reports as to the quality of the accommodation, and of the general amenities at the Vancouver laboratories, remains unaltered. These grave defects have all along added immensely to the technical difficulties of performing essential skilled work and, with the enlarging staff, have contributed to a perceptible lowering of morale which may take many years of hard effort to rectify. It is hoped that before the annual report for 1946 is presented, a definite and satisfactory decision may have been reached regarding the future location and organization of the laboratories. The views of the Director of the Division, and of the medical profession, on these matters have been repeatedly and clearly expressed.

Reference was made in last year's annual report to the need for revision of the branch laboratory arrangements. Now that the war is over, it is hoped this overdue step can soon be taken. During the year Dr. R. G. D. McNeely, the new Director of the Victoria laboratory at the Royal Jubilee Hospital, visited the central laboratories twice. Visits were also received from Dr. R. J. Brummitt, Dr. A. G. Naismith, and Mr. George Darling, who are in charge of the Nelson, Kamloops, and Nanaimo branch laboratories. The Bacteriologists at the Nelson, Prince Rupert, and Kelowna laboratories—Miss Johnson, Miss Rushworth, and Miss Forcade—also called in at Vancouver during the year to discuss local problems. Fairly close touch was thus maintained with all six of the branch laboratories, and they continued to do extremely useful work despite numerous difficulties.

In September the Prince Rupert laboratory reverted to its pre-war status, with Dr. R. E. Coleman being solely responsible for the work. Even before the end of the war, withdrawal of United States troops from the area had considerably reduced the turnover of laboratory-work there, and since Prince Rupert was not, like Vancouver and Victoria, a discharge centre for the armed forces, routine serological tests did not compensate for the decline in other types of tests. Dr. Coleman and Miss Rushworth, therefore, both felt the latter's whole-time services were no longer needed. At personal inconvenience, Miss Rushworth agreed to help out the Victoria laboratory, which was temporarily overwhelmed with serological work from naval personnel, and she remained at the Royal Jubilee Hospital in the employ of the Royal Canadian Navy until the end of the year.

The Kelowna laboratory suffered a loss in the death of its Bacteriologist, Mr. F. Smith, early in the year. Mr. Smith had struggled, with fortitude, for many years against increasing illness. He was succeeded by Miss B. M. Forcade, who spent a week familiarizing herself with procedures used in the main laboratories later in the summer.

Finally, the Director wishes to record once more his appreciation of the meritorious work done by the staff during the year. Special acknowledgments are due to Miss D. E. Kerr, Assistant Director, who shouldered heavier responsibilities than ever, and to the following senior staff members: Miss M. Malcolm, Senior Bacteriologist; Miss E. M. Allan, Serologist; Miss V. G. Hudson, Bacteriologist in charge of milk and water analyses and throat cultures; Miss H. Chang, Bacteriologist in charge of tuberculosis cultures and animal inoculations, and miscellaneous examinations; Mrs. M. B. Allen, clerk in charge of the office; and Miss B. Thompson, clerk in charge of supplies. Without their loyal and efficient co-operation, the year's many problems would have been insuperable.

TABLE I.—STATISTICAL REPORT ON EXAMINATIONS DONE DURING THE YEAR 1945.

Examination.	Out of Town.	City.	Total in 1945.	Total in 1944.
Animal inoculations	114	408	522	474
Blood agglutinations—				
Typhoid-paratyphoid-dysentery group	1,612	6,416	8,028	7,810
Brucellosis	445	1,722	2,167	1,957
Infectious mononucleosis	56	175	231	*
Miscellaneous	14	56	70	18
Cultures—				
M. tuberculosis	225	745	970	763
Typhoid-paratyphoid-dysentery group	498	2,346	2,844	2,674
C. diphtheriæ	708	8,891	9,599	8,962
Hæmolytic staphylococci and streptococci	593	2,544	3,137	4,316
Gonococcus	.....	10,619	10,619	8,545
Miscellaneous	172	320	492	508
Direct microscopic examination for—				
Gonococcus	3,301	27,974	31,275	28,739
M. tuberculosis (sputum)	2,035	4,636	6,671	6,416
M. tuberculosis (miscellaneous)	225	745	970	485
Treponema pallidum	45	621	666	393
Vincent's spirillum	33	326	359	219
Ringworm	5	57	62	189
Intestinal parasites	30	194	224	95
Serological tests for syphilis—				
Blood—				
Presumptive Kahn	17,378	101,829	119,207	82,736
Standard Kahn	3,658	13,693	17,351	17,310
Complement fixation	2,911	11,451	14,362	14,644
Cerebrospinal fluid—				
Kahn	371	1,696	2,067	1,845
Complement fixation	383	1,783	2,166	1,967
Cerebrospinal fluid—				
Cell count	255	965	1,220	1,364
Protein	250	1,292	1,542	
Colloidal reaction	365	1,719	2,084	1,855
Milk—				
Bacterial count	304	1,273	1,577	1,466
Coli-ærogenes	304	1,273	1,577	1,466
Phosphatase test	178	740	918	781
Water—				
Total bacterial count	9	525	534	592
Coli-ærogenes	1,645	1,064	2,709	2,850
Unclassified tests	73	115	188	328
Totals	38,195	208,213	246,408	201,767

* Previously included under " Miscellaneous Tests."

Table II.—Number of Tests performed by Branch Laboratories in 1945.

Examination.	Kamloops.	Kelowna.	Nanaimo.	Nelson.	Prince Rupert.	Victoria.	Total, 1945.	Total, 1944.
Animal inoculations	------	------	------	------	------	56	56	84
Blood agglutinations—								
Typhoid-paratyphoid-dysentery group	238	93	416	222	16			728
Brucellosis	238	27	447	47	69	291	2,116	854
Miscellaneous	------	12	------	------	------			240
Cultures—								
M. tuberculosis	------	46	------	------	------	------	46	25
Typhoid-paratyphoid-dysentery group	12	38	------	18	------	200	268	190
C. diphtheriæ	58	24	59	10	44	807	1,002	2,144
Hæmolytic staphylococci and streptococci	79	13	------	301	130	820	1,343	1,507
Gonococcus	------	5	------	------	------	1,896	1,901	3,041
Miscellaneous	74	18	------	6	36	------	134	119
Direct microscopic examination for—								
Gonococcus	640	120	585	891	657	4,591	7,484	6,260
M. tuberculosis (sputum)	191	255	812	1,752	320	3,948	7,278	7,810
M. tuberculosis (miscellaneous)	7	4	------	15	5	60	91	------
Treponema pallidum (dark-field)	19	1	------	------	50	131	201	113
Vincent's spirillum	51	1	90	29	37	251	459	289
Ringworm	4	4	------	------	2	26	36	13
Intestinal parasites	12	14	------	10	------	89	125	105
Serological tests for syphilis—								
Blood—								
Presumptive Kahn	------	------	------	------	2,223	37,895	40,118	23,364
Standard Kahn	3,261	977	3,191	4,316	1,044	403	13,192	7,481
Complement fixation	------	10	------	------	86	2,198	2,294	873
Cerebrospinal fluid—								
Kahn	70	14	54	------	87	282	507	566
Complement fixation	------	10	------	------	------	141	151	149
Cerebrospinal fluid—								
Cell count	42	11	98	52	103	173	479	596
Protein								
Colloidal reaction	25	6	48	------	89	134	302	411
Milk—								
Bacterial count	138	40	------	462	186	743	1,569	1,601
Coli-ærogenes	------	165	31	472	178	745	1,591	1,623
Miscellaneous (phosphatase, etc.)	------	1,162	------	------	14	593	1,769	1,596
Water—								
Total bacterial count	------	146	------	14	------	157	317	339
Coli-ærogenes	100	356	243	240	395	164	1,498	1,409
Unclassified tests	67	10	104	32	21	------	234	201
Totals, 1945	5,326	3,582	6,178	8,889	5,792	56,794	86,561	------
Totals, 1944	5,015	2,860	4,638	6,550	8,382	36,286	------	63,731

REPORT OF THE DIVISION OF VENEREAL DISEASE CONTROL.

DONALD H. WILLIAMS, M.D., DIRECTOR.

INTRODUCTION.

A review of the effort of the Division of Venereal Disease Control, Provincial Board of Health, in relationship to the problem confronting the Division during the year 1945 should produce upon an interested citizenry in the Province of British Columbia concern for the growing magnitude of the menace of venereal infection. This reaction will be tempered, however, by hopefulness for the future through the knowledge that during the year portents of more effective future control over the twin scourges of syphilis and gonorrhœa became evident.

With the termination of war during the year, it was reasonable to anticipate the dissipation of administrative difficulties related to personnel shortages. The gradual beginning of improvement in this regard was observed. Reorganization of the central office was begun along lines agreed upon in 1944, and to a large extent the major portion of this reorganization was accomplished. As a supplement to this annual report of the Division, there follows a presentation of the programme of venereal disease control measures, Provincial Board of Health, British Columbia, which outlines the Division's historical development, organization, administration, functions, and principles of policy.

During the year the beneficence of science in the form of penicillin became widely available to sufferers from venereal infection in the Province. Ironically, as with the war of 1914–18, the coming of peace brought with it the onset of the expected and much feared post-war epidemic of venereal infection.

INCREASE IN NEW VENEREAL INFECTION.

At this time complete and corrected statistics on the notification for venereal infection for 1945 are not available. Estimates, based upon eleven months of the year, however, portray a disturbing public health picture. Total new notifications from all sources—clinics, private physicians, and armed forces—increased over the 1944 figure of 4,737 infections by 16 per cent. It is not easy to assess the exact significance of this increase, nor, indeed, that of many of the statistics on venereal infection, based as they are upon only partial reporting of the total cases. Viewed from any angle, the amount of reported disease for the year represents a very serious health problem.

The increase of 16 per cent. might be ominously significant, indicating a real increase in new disease on the one hand or, on the other, it might represent only an apparent increase, based upon better notification of previously unreported instances of infection. The disquieting feature lies in the record of recently acquired syphilis in the clinics of the Division for the year. The number of primary and secondary syphilis cases doubled in 1945 as compared with 1944. Neither better reporting, greater and earlier popular use of the clinics, increase in population, nor improved contact-finding can entirely or probably even to any great extent explain the unfavourable rise in incidence. This figure, taken in conjunction with the reporting of 3,578 new gonorrhœa

infections in the first eleven months of 1945, indicates a rapidly increasing health hazard already of alarming magnitude and fraught with grave future potentialities unless it is curbed aggressively by all means available.

What is responsible for this unsatisfactory situation? This question has given the Division much thought and indeed it should be pondered by all citizens concerned with the welfare of the Province. The complete answer is not yet available. At present special studies are being carried out to clarify it. Certain causative elements are known, however, and should be noted. First and foremost, it is an inescapable epidemiological fact that sexual promiscuity is the great spreader of venereal infection, and from this fact and the venereal disease picture for 1945, it is evident that there is extensive sexual promiscuity in the Province. How much stimulus is given to this form of conduct by the excessive alcoholic beverage consumption of the Province, and the unfavourable conditioning influence of certain types of motion pictures and popular literature, is worthy of very serious consideration. Undoubtedly the prolonged tension of war and the acknowledged disintegration of home and family life have accelerated the loosening of moral standards which, it is agreed, have been gradually tumbling since the war of 1914–18. To meet the challenge which these endangering elements suggest, there most certainly exists a task for the co-ordinated efforts of the health, welfare, legal, and moral forces in the Province of British Columbia.

REORGANIZATION AND ADMINISTRATION.

In 1944 a committee of senior Board of Health personnel reviewed the organization and administration of the Division of Venereal Disease Control and recommended reorganization of the Division under five sections: Administration, Information and Public Relations, Epidemiology, Diagnostic and Treatment Services, and Social Service. During 1945 these recommendations were implemented. Five sections were established, each with a qualified person in charge and each with its functions and scope specified. Regular weekly conferences of the section heads were held. A system of daily recording of items of administrative importance was inaugurated. Each week key items from these daily reports were compiled in a regular weekly report for the transmission to senior Board of Health personnel in Victoria for their information.

The Provincial Board of Health indicated to the Department of Veterans' Affairs its willingness to accept responsibility for the provision of medical care for all veterans resident in the Province who suffered from venereal infection and who sought care at any clinic operated by the Board. In the matter of care for soldiers' dependents with venereal infection, the Dependents Advisory Board was informed that in those instances where treatment was required by dependents living in areas where clinic service is available, they should receive treatment in these clinics. Where soldiers' dependents requiring treatment in areas where clinic service was not available, the Board of Health agreed to arrange through the Health Unit Director or the local health officer for treatment by a qualified physician of the patient's choice who would be remunerated on the same basis as for indigent patients.

A tentative agreement was made with hospitals in rural areas and in municipalities outside Vancouver and Victoria to pay for the hospital care of

patients with early infection in a communicable state. Where Indians were concerned, the Indian Affairs Branch agreed to pay for hospital services.

In keeping with good public health practice, a policy was instituted of annual examinations of the staff of the Division, including blood tests and chest X-ray.

The excellent liaison with the armed forces' medical services in Pacific Command on venereal disease matters continued during the year and was a source of great gratification to the Division. The services provided detailed information on contacts and facilitating community conditions in most instances of infection. Each month meetings were held to discuss problems of mutual interest and to plan co-ordinated action against common sources of disease dissemination.

The assistance of the Department of National Health and Welfare in supplying the annual grant of $15,400, including $1,738 for education and the provision of arsenical medication valued at $3,895, was appreciated. Additional help from the Department in the form of recently developed educational media contributed considerably to the effectiveness of the Division's educational effort.

The value of the weekly compilation of new notifications of venereal infection in Canada by the Dominion Bureau of Statistics added much to the better appreciation of the national venereal disease problem and its Provincial components.

INFORMATION AND PUBLIC RELATIONS.

Following a period of two years, during which it was impossible to obtain the services of a full-time Health Educator, the Division was fortunate in filling this personnel deficiency. The broad educational field again came under the care of one individual, and immediately renewed progress in this field of activity became evident.

One of the most important projects launched was the study of the nature and scope of venereal disease education in senior high schools in British Columbia. A detailed memorandum on the subject was prepared for the consideration of senior personnel of the Provincial Board of Health and the Department of Education. This memorandum recommended the introduction of venereal disease education through amendments to the present programme of senior high school health education as outlined in "Health and Physical Education for Senior High Schools of British Columbia, Bulletin II., 1945." The adoption of this approach would do away with the previous programme of lectures by members of the Division. In the meantime a limited number of high schools were given lectures pending change of policy.

Arrangements were completed for distribution of educational literature and posters to all deep-sea merchant vessels entering the ports of Vancouver and New Westminster. This arrangement also covered most coastal vessels. The Merchant Seamen's Manning Pool and the office of the Shipping Master were additional distributing centres for materials. With the co-operation of the B.C. First Aid Attendants Association and the St. John's Ambulance Association, a variety of industrial groups received educational materials of all types on a regular repetitive basis. The So-Ed College of the Y.M.C.A. and

the community leaders of the Pro-Rec centres were addressed. The Provincial Director of the Pro-Rec agreed to have community leaders act as distributing agents for educational items.

During the year the Division assisted in the venereal disease educational campaign sponsored jointly by the Health League of Canada and the Canadian Pharmaceutical Association. This effort was supported by the majority of drug-stores in British Columbia, who co-operated by displaying special window exhibits and by distributing literature.

The professional educational aspect of the programme was not neglected. A symposium on "Recent Advances in Venereal Disease Control" was given by consultants at the annual meeting of the British Columbia Medical Association. Consultants of the Division attended medical meetings in the Okanagan and the Kootenay areas. Special lectures continue to be given to student nurses, graduate nurses, social service students and workers, and to Normal School students.

PUBLIC HEALTH NURSES AS EPIDEMIOLOGY WORKERS.

With reorganization and the creation of the section on epidemiology, clarification of the duties of the Public Health Nurse in the Division was undertaken. The staff of nurses was increased to ten, including the nurse in charge of the section. Division of responsibilities as between Public Health Nurses and social workers was accomplished satisfactorily. Contact-tracing and case-holding became a function of these nurses, and accordingly the case load was transferred from the Social Service Section to that of Epidemiology.

A detailed memorandum on all phases of policy concerning epidemiology work was prepared. This document dealt with policy as it related to authority, responsibilities, lines of communication, correspondence, and relationships with local programmes and social assistance workers.

A concise guide for case-finding and case-holding was prepared for the use by Public Health Nurses of the Division acting as field epidemiology workers. The purpose of this guide is to promote more effective epidemiology by reducing the time spent on cases which are not a public health problem, and thereby leaving the nurse free to concentrate her efforts on those cases which are more important from the public health point of view.

During the year active participation of the Public Health Nurses of the Cities of Vancouver and Victoria in case-finding and case-holding was inaugurated. To assist in developing this new extension of the nurses' duties in these municipalities, the Division provided special preparatory observation and training periods at its clinics.

The Indian Affairs Branch notified the Division of its approval of Public Health Nurses performing epidemiological duties on Indian reservations.

DISTRIBUTION OF FREE PENICILLIN.

World stocks of penicillin reached such an extent during 1945 that the military requirements were met and sufficient of the drug remained for extensive civilian use. In keeping with the Provincial Board of Health's policy of providing physicians, upon request, with approved medication for the treatment

of venereal disease, penicillin was added to the list of therapeutic agents available.

Arrangements were made for distribution through all clinics and all full-time Health Units. It was necessary to restrict its free distribution to cases of early communicable infection in which the public health significance was important. Accordingly, the distribution was limited to all proven and suspected (clinical and (or) epidemiological evidence) cases of gonorrhœa, and to cases of early syphilis which fall into one of the following categories: Serious reactions to routine arsenic-bismuth therapy; relapsing, resistant, or fulminating forms of early infection; early syphilis in asocial promiscuous persons; early syphilis in persons unable to obtain regular weekly treatment (remote rural areas, certain seamen, fishermen, loggers, miners, etc.); elderly persons with early infection; and for persons with "difficult" veins—addicts, obesity, etc.

CLINIC SERVICES.

The clinics of the Division continued to provide diagnostic and treatment services for a large number of citizens. The increase in venereal infection and the transference of veterans discharged from the armed forces requiring further treatment added considerably to the clinic case loads.

New clinics were opened at the Juvenile Detention Home and the Girls' Industrial School. Unfortunately, the Prince Rupert clinic had to be closed because of inability to obtain a physician-in-charge, following the resignation of the Health Unit Director of that area. The New Westminster clinic was transferred from the Royal Columbian Hospital to the fine new building erected by the Gyro Club in the City of New Westminster. In this building the Division shares accommodation with the Division of Tuberculosis Control.

The administration of penicillin on an ambulant basis to all clinic patients with gonorrhœa was instituted and appeared to be a decided improvement over previous therapeutic measures.

SOCIAL SERVICE.

For the first time since the reorganization of the Division of Venereal Disease Control in 1936, a section of social service devoted completely to welfare problems and related aspects of the Division's programme began its work. The beneficial effect of this much needed innovation was immediately evident.

The rôle of the social worker in the field of venereal disease control was clarified in a special study and memorandum on the subject. This memorandum outlined the criteria for an adequate case work service, agency referral policy, including the interpretative function, the collection of social data, and the objectives of the Provincial programme.

A special study on social factors contributing to the acquisition of venereal infection was instituted. A series of fifty case-studies were made on persons between the ages of 16 and 25 years with recently acquired syphilis. This outstanding study will be the basis of community action during the coming year. The final section in the study merits quotation in full:—

"The family is the fundamental unit of society and it is the basic training in the family group which determines in which direction the child will go.

Every child has a deep-seated emotional urge to belong to a normal family with two parents living in harmony together, having an adequate home and income and opportunities for recreational and social activities. He has a natural desire for affection, security, approval, and recognition in his home. The family group is a complex relationship of different individuals and the anti-social behaviour trends which sometimes develop in its members are frequently a symptom of conflicts, frustrations, and disappointments which were suffered during childhood.

" From our study of the home-life and family background of fifty young persons with new syphilis infections, we find that the basic disabilities are the same and that the roots of their present behaviour are in their home training and family relationships where both physical and emotional needs were lacking.

" Venereal disease is a symptom and a result of deeply rooted maladjustments, the remedy of which must begin in early childhood through the combined efforts of such community resources as the home, school, church, police, medical, social, and recreational bodies who must work together as a co-ordinated group."

Arrangements were completed whereby infected pregnant women who required hospital care would be admitted to the United Church Home, Our Lady of Mercy Home, and the Salvation Army Home.

FACILITATION.

The function of collecting data on facilitation and compiling them as a basis for community action became a responsibility of the Social Service Section. The distribution of data on facilitating premises each month to responsible authorities and to interested agencies was continued. During the year this policy brought increasing community action, particularly in respect to certain dance-halls and cafés.

Again this year as in former years, the Division records that certain well-known brothels at well-known addresses, operated by well-known madame-owners, in the City of Vancouver continued their profitable disease-spreading activity without any apparent restrictive legal restraint. Certain cafés, dance-halls, beer-parlours, and hotels continued to provide opportunities for infected persons to meet uninfected citizens and thereby spread disease.

The receipt of two outstanding draft manuals developed by the Department of National Health and Welfare—namely, " Techniques of Action Against Facilitation in V.D. Control " and " The Community Attacks Venereal Disease " —represented a distinct contribution to the Province in the field of directing specific action against various types of facilitation.

CONTROL NEEDS AND FUTURE PLANS.

No annual assessment of a venereal disease control programme can be considered complete unless reference is made to existing deficiencies in the programme, which, within reason, it may be hoped can be corrected in the ensuing year. A few of these are listed as follows:—

(1.) The extension of full-time health service to the entire Province would enable the development of a sound venereal disease control service on a comprehensive basis to all communities, and in par-

ticular would strengthen the existing inadequate service to rural areas.

(2.) A minimum of three full-time administrative medical officers should be appointed to the Division.

(3.) The separation of the central office and its personnel from the Vancouver clinic unit would influence favourably the administration of venereal disease control in the Province as a whole.

(4.) The co-ordination of Vancouver clinic services into a polyclinic with other Provincial Board of Health clinic services in the Vancouver area merits consideration.

(5.) The organization of a "four-sector front" attack against venereal disease in the Province is an urgent need.

(6.) A professional educational programme for physicians should be launched preliminary to the implementing of pre-marital blood-testing legislation.

(7.) Further study should be given to the development of a rehabilitation and treatment centre for women.

REVIEW OF VENEREAL DISEASE CONTROL PROGRAMME.

To give a concise word-picture of a progressively developing health programme to meet a complex and constantly changing public health problem of great extent is the difficult purpose of this presentation. During the seven-year period ended in 1944, there were reported to the Provincial Board of Health 22,776 persons suffering from venereal infection in British Columbia. Of these, 14,566 had gonorrhœa and 8,210 were infected with syphilis. The magnitude of the problem is self-evident. An outline is given of the venereal disease control programme of the Provincial Board of Health as it is organized to meet this threat to the citizens of the Province.

HISTORICAL.

In 1919, as part of a Canada-wide concern over the venereal disease problem arising out of the war of 1914–18, the first organized effort of the Provincial Board of Health in British Columbia was launched. To provide the legal basis for the administration of control measures, "An Act for the Suppression of Venereal Diseases" was passed by the Provincial Legislature. During the following year the new programme was inaugurated. It consisted of two out-patient clinics, one each in the Cities of Vancouver and Victoria; the distribution of free medication to physicians; the payment of physicians for services rendered to indigent patients in rural areas; and a system of notification of venereal infection. The programme was administered directly by the Provincial Health Officer without creation of a special administrative division.

The Dominion Council of Health presented the seriousness of the venereal disease situation in Canada to the Federal Government, with the result that the Government in 1920 instituted a policy of issuing annual grants to the Provinces. The total Federal grants to British Columbia from 1921 to 1932 were $105,460. At the end of the latter year the subsidies were temporarily discontinued. In addition to these grants, the Federal Government annually provided

arsenical preparations for free distribution to physicians. In 1943 the Federal Government resumed its annual Provincial grants. The amounts for recent years are listed in the following table:—

TABLE OF EXPENDITURE ON VENEREAL DISEASE CONTROL, PROVINCE OF BRITISH COLUMBIA, 1941–45.

Year.	Provincial Funds.	Federal. Funds.	Total Funds.	Population.	*Per Capita.*
					Cents.
1941	$82,600	$3,000*	$85,600	818,000	10.4
1942	82,200	3,000*	85,200	870,000	9.8
1943	82,700	12,200	94,900	900,000	10.5
1944	85,300	13,600	98,900	932,000	10.6
1945	137,900	15,400	153,300	956,000	16.0

* Value of arsenical medication only.

With the gradual development of a more realistic attitude on the part of the public toward the neglected problem of venereal infection, the non-effectiveness of existing control measures in the Province was recognized. Accordingly, in October, 1936, the Provincial Board of Health created a Division of Venereal Disease Control for the purpose of developing and directing a comprehensive programme of preventive health measures on a Province-wide basis. Funds, personnel, equipment, and accommodation were provided commensurate with the magnitude of the problem.

PRINCIPLES OF VENEREAL DISEASE CONTROL IN BRITISH COLUMBIA.

The programme of the Division of Venereal Disease Control is based upon the recognition of certain fundamental principles which influence the form of the existing organization and administration, and delimits the scope of the field in which the Division operates. Full recognition is given to the fact that the venereal diseases can not be eradicated by health measures alone. The factors associated with the acquisition and transmission of syphilis and gonorrhœa are complex. They are rooted in inherent defects in human behaviour and in certain inadequacies of our social and economic life.

The National Venereal Disease Control Conference in 1943 subscribed to this view-point, and on this basis a charter was adopted to guide Canada's venereal disease control effort. The principles approved by this national conference have been adopted in British Columbia.

THE FOUR-SECTOR FRONT AGAINST THE VENEREAL DISEASES.

To reduce venereal infection in the Province, it has been considered necessary to attack the problem simultaneously from four directions, one of which, the health thrust, comes within the purview of the Provincial Board of Health, Division of Venereal Disease Control. The Department of National Health and Welfare describes the four-sector front against the venereal diseases as consisting of:—

" Health, Welfare, Legal, and Moral Sectors—components of an indivisible whole aligned against a common foe. The ultimate objective is to destroy syphilis and gonorrhœa. The purpose of each sector is to take the offensive with the weapons peculiar to its own method of attack. Waging unrelenting war on the Health Sector, with weapons of modern medical science and public health procedure, will be physicians, nurses, and health departments. Leading the attack on the Welfare Sector will be found social workers and welfare agencies armed to battle squalor, overcrowding, lack of food, neglect, and insecurity. Directing a vigorous action on the Legal Sector will be the Courts, the legal profession, and police agencies whose action seeks out and brings to justice those who for personal gain purvey to man's weaknesses. On the Moral Sector the battle is to be led by the churches and homes of Canada, strengthening the moral fibre of our nation and upholding the sanctity of marriage and family life. Each sector has its own territories, its own personnel and armaments. The ultimate objective is the same."

This announcement of policy defines the principles and objectives of the four fields of action envisaged in a comprehensive approach to venereal disease control.

THE SIX-POINT STRATEGY OF THE HEALTH SECTOR.

The National Venereal Disease Control Conference adopted an outline of policy which it considered should be the basis of the public health programme of control measures. Along the lines outlined by this policy, the British Columbia programme has been developed since 1938. As announced by the Department of National Health and Welfare the six-point strategy is as follows:—

(1.) *Health Education.*—The facts concerning venereal disease will end the conspiracy of silence, banish outworn fallacies, and remove false fears. Lectures, motion pictures, posters, and pamphlets will tell the story of how venereal disease may be vanquished.

(2.) *Medical Care.*—Every Canadian who requires examination and treatment should have the best that medical science can provide by health departments. It is cheaper to cure and prevent venereal disease than to pay taxes for the end results of neglected infection.

(3.) *Abolition of Quackery.*—Laws exist in Canada to protect citizens from the quack and charlatan. Only qualified physicians are permitted by law to care for those suffering from venereal diseases. The public must be protected from the incompetent and the rogue.

(4.) *Prenatal Blood Tests.*—Every expectant mother must have a blood test for syphilis before the fifth month. Demand it! Insist upon it! It is the only protection many unborn children have.

(5.) *Pre-marital Blood Tests.*—Health examinations, including blood tests, are a safeguard against the sinister encroachment of syphilis on home and family life.

(6.) *Contact Investigation.*—Careful search must be made for all who have been contacts to known venereal disease. Only by seeking

these people and by bringing them under medical supervision can the extending network of venereal disease be destroyed.

ADMINISTRATION OF THE DIVISION OF VENEREAL DISEASE CONTROL.

In the Province of British Columbia the responsibility for the administration of venereal disease control measures rests with the Provincial Board of Health. Under the Board, the Division of Venereal Disease Control operates as one of the Board's principal organizational sections. The organization chart of the Provincial Board of Health in the "Administration of the Provincial Health Services of the Provincial Board of Health, Victoria, B.C., 1943,"* shows "the chain of responsibility and authority and the flow of services from the various bureaus and divisions to the local health services and through them to the people of the Province of British Columbia." Each Division is "developed to simplify administration and not to act as a water-tight compartment." Full recognition is given to the interdependence of all public health effort in each Bureau and Division. In the case of the Division of Venereal Disease Control this is particularly apropos where the Division of Laboratories, the Division of Vital Statistics, and the Bureau of Local Services all perform duties essential to the adequate control of venereal infection in the Province.

In Figure 1 an organizational chart of the Division of Venereal Disease Control portrays the principal services of the Division with the respective sections created to perform these functions. It also shows the relationship of these Provincial Board of Health services to the local community organizations and thereby to the public for whom they are primarily provided.

There are five sections in the Division—Administration, Information and Public Relations, Epidemiology, Diagnosis and Treatment, and Social Service. Each section, with a qualified person in charge and with necessary staff, has a specific programme to accomplish within a specified field of public health action. The central office of the Division which houses these sections is situated at 2700 Laurel Street, Vancouver, B.C. These central administrative offices occupy a building jointly with the Vancouver clinic, as shown in Figure 2.

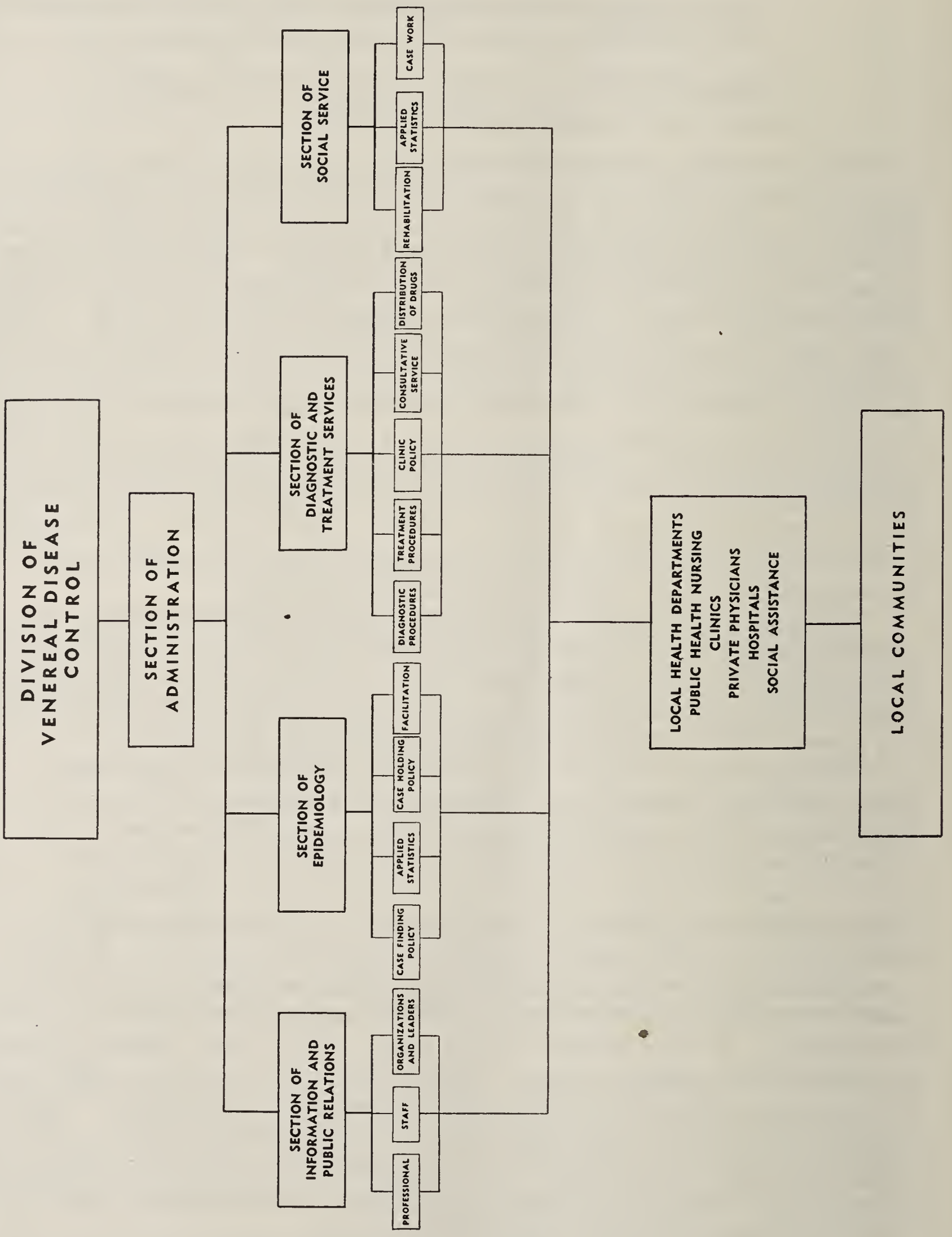
Funds for the services of the Division of Venereal Disease Control are provided by the Provincial Government with an annual grant from the Federal Government. For the five-year period from 1941 to 1945, amounts available are shown in the table on page . Population figures and *per capita* grants for each year are listed in relationship to the annual expenditure. The Provincial funds listed are only those voted by the Legislature specifically for the Division. To get the complete Provincial expenditure, certain portions of the voted expenditure of other Bureaus and Divisions, notably that of the Division of Laboratories, would have to be added.

A Director responsible to the Provincial Health Officer is in charge of the administration of the Division. Sixty persons are employed under the following personnel categories:—

Director and Assistant Director	2
Physicians (part time)	18

* Copies may be obtained from the Provincial Health Officer, Provincial Board of Health, Victoria, B.C.

FIGURE 1.


DIVISION OF VENEREAL DISEASE CONTROL
SECTION OF ADMINISTRATION
SECTION OF DIAGNOSTIC AND TREATMENT SERVICES
DIAGNOSTIC PROCEDURES
TREATMENT PROCEDURES
CLINIC POLICY
CONSULTATIVE SERVICE
DISTRIBUTION OF DRUGS
SECTION OF SOCIAL SERVICE
REHABILITATION
APPLIED STATISTICS
CASE WORK
SECTION OF EPIDEMIOLOGY
CASE FINDING POLICY
APPLIED STATISTICS
CASE HOLDING POLICY
FACILITATION
SECTION OF INFORMATION AND PUBLIC RELATIONS
ORGANIZATIONS AND LEADERS
STAFF
PROFESSIONAL
LOCAL HEALTH DEPARTMENTS
PUBLIC HEALTH NURSING
CLINICS
PRIVATE PHYSICIANS
HOSPITALS
SOCIAL ASSISTANCE
LOCAL COMMUNITIES

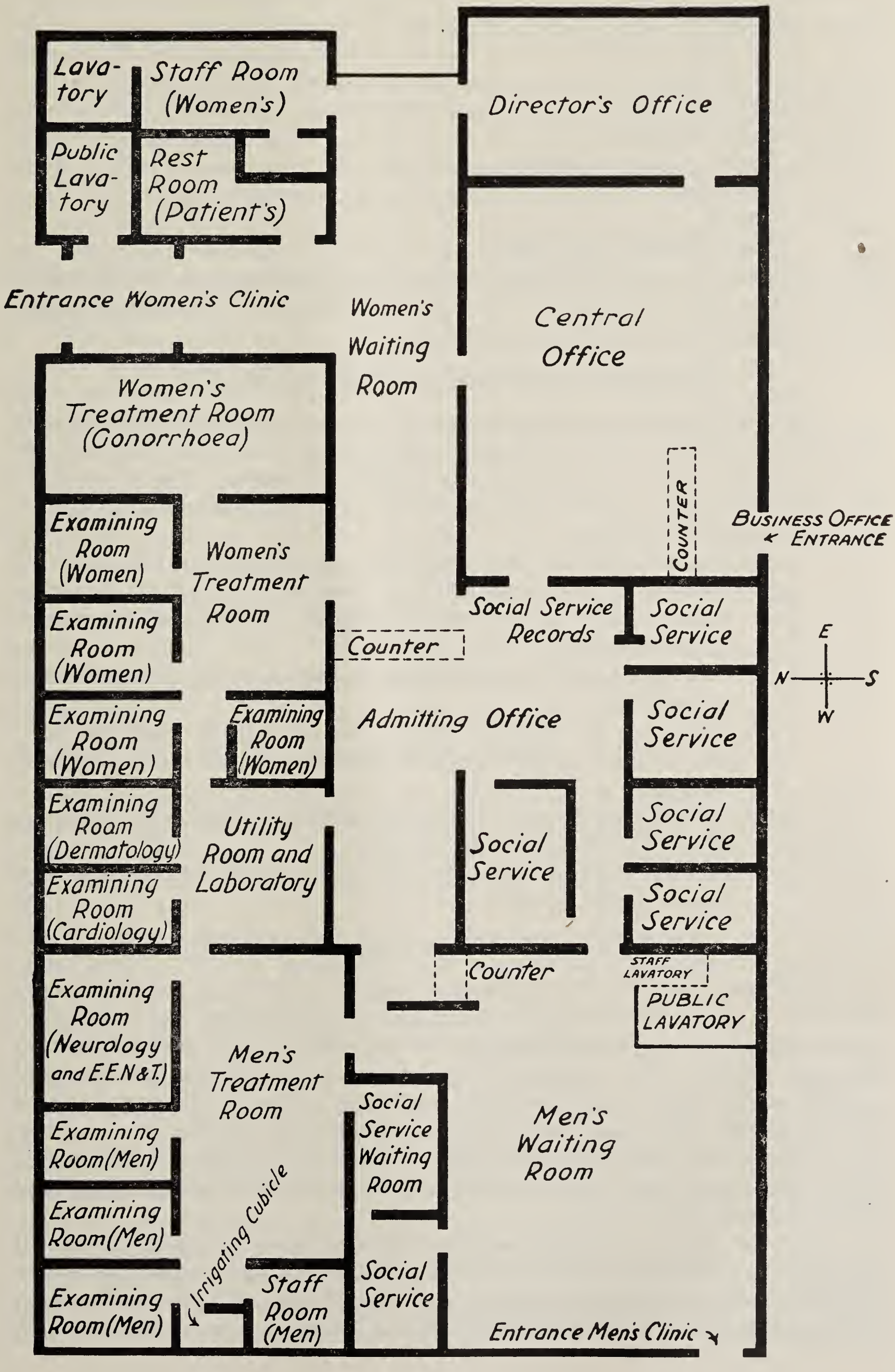


Figure 2. Plan of central office and Vancouver clinic, Division of Venereal Disease Control, 2700 Laurel Street, Vancouver, B.C.

Nurses—	
Public Health	10
Clinic	9
Social workers	2
Health Educator	1
Clerks and stenographers	15
Technician	1
Janitor	1
Clinic assistant (part time)	1

These individuals are distributed in the various sections of the Division's central office and in its clinics. The highest standards of training and experience are required in all personnel employed.

"VENEREAL DISEASES SUPPRESSION ACT."

The "Venereal Diseases Suppression Act," passed in 1919 and amended in 1938, with regulations made pursuant to the Act, provides the legal basis for venereal disease control in the Province of British Columbia. The terms of the Act are far-reaching and the powers granted are comprehensive. Briefly, it provides for the following:—

(1.) Physicians must report all known cases of venereal infection.
(2.) Persons affected and refusing treatment, or acting in such a manner as to spread infection, may be detained for examination and treatment.
(3.) Adequate facilities for laboratory diagnosis and treatment must be provided.
(4.) Secrecy in the administration of the Act must be maintained.
(5.) Only legally qualified medical practitioners may treat venereal diseases.
(6.) Advertising of drugs, medical instruments, etc., for the treatment of venereal diseases is prohibited.
(7.) The Provincial Health Officer is given wide powers to make regulations under the Act.

INFORMATION AND PUBLIC RELATIONS.

A section on information and public relations, headed by a qualified Health Educator, is responsible for the development and maintenance of a programme of professional and public enlightenment on the subject of the venereal diseases and their control. The function of this section is to organize informational projects which will, on the one hand, assist the professional groups—public health, welfare, physicians, nurses, pharmacists, teachers, police, etc.—in keeping abreast of new medical and technical advances in a rapidly developing field and, on the other hand, bring to an interested public factual information on a wholesome dignified basis.

For both groups, carefully selected media, some of it developed by the Division, are available in the form of books, pamphlets, leaflets, posters, motion pictures, displays for show windows and conventions, etc. In the five-year period ended 1944, a total of 949,095 pieces of literature were distributed and,

in the same period, members of the staff of the Division addressed public gatherings on 631 occasions.

In keeping with the general policy of the Provincial Board of Health, the personnel of the Division devote their educational activities principally to key organizational groups such as Women's Institutes, Parent-Teacher Associations, church organizations, British Columbia School Trustees, Teachers' Federation, Union of British Columbia Municipalities, labour unions, service clubs, etc. Through local health services, and in particular through Health Units, the programme reaches each community. Here on a local level the Health Unit Director and the Public Health Nurse devote attention to the key community groups.

The press, radio, motion picture, and journal publications are all utilized as the occasion requires. Specific educational programmes are organized to meet particular needs and have included in the past the development of a Province-wide high school educational programme, a prenatal programme, an industrial campaign, and a programme of public enlightenment on the health hazard of commercialized prostitution.

All physicians are provided with informative literature pertaining to public health procedure and approved diagnostic and therapeutic measures. Films and speakers are available for medical society meetings. Lectures or lecture material are given to all nurses' training-schools in the Province, and special lectures are given at the Public Health Nurses' course at the University of British Columbia. Each year the students of the Normal Schools receive lectures. The annual meetings of public health personnel and welfare workers enable the Division to present pertinent educational problems to these important community groups.

EPIDEMIOLOGY.

The paramount importance of the epidemiological approach in the control of venereal infection is given recognition by the provision of a special section to deal with this phase of control and other closely related aspects of the problem. A specially trained Public Health Nurse responsible to the Director of the Division and to the Director of Public Health Nurses is in charge of the section. Nine additional Public Health Nurses constitute the field personnel of the section. Six are employed in the metropolitan Vancouver area, and one each assigned to the Vancouver Island territory, to the Fraser Valley, and to the remaining portion of the Province.

This section is responsible for the development and maintenance of an adequate contact-finding and case-holding programme. The staff, in addition to performing field duties in their respective areas, assist local health services, and in particular train and assist Public Health Nurses in duties related to those coming within the scope of the Epidemiological Section. In the Cities of Vancouver and Victoria the Public Health Nurses of the municipal health service are gradually assuming a greater responsibility for the epidemiology of venereal infection in their respective territories.

Contact-finding demands special training and the qualities of ingenuity, patience, tact, and discretion on the part of the Public Health Nurse engaged upon this work. The approach varies, depending upon the completeness of

identifying data provided and upon the arbitrary group into which the contact falls—independent single person, marital, extra marital, dependent minor; when data concerning contacts are obtained, information is collected in each instance on the facilitation process involved. The promotion of continual and voluntary treatment of actual or potential delinquent patients in the face of difficult emotional, social, and economic problems is the task of these nurses.

That part of the duties of the personnel of the Section of Epidemiology pertaining to liaison with Public Health Nurses in the field throughout the Province consists in stimulating:—

(1.) The control of syphilis in pregnancy and the prevention of prenatal syphilis as an extension of the local maternity programme.
(2.) General nursing and health supervision programmes containing all procedures required for the care of children with prenatal syphilis.
(3.) Assistance in control of gonorrhœa through the local maternity and communicable diseases services.
(4.) Nurses in schools and industrial organizations assisting in case-finding through observation of systems, knowledge of health and programme records, and by assistance with medical histories and examinations.
(5.) The inclusion of education on venereal infection in a programme of public health education as planned and incidental teaching.

DIAGNOSTIC AND TREATMENT SERVICES.

The diagnostic and treatment facilities represent a prominent feature of the Provincial Board of Health's venereal disease control service in the Province. Public clinics, laboratory services, medication, and consultative advice are the chief means by which diagnostic and therapeutic assistance reaches the citizen requiring it. These services are free to all persons without restriction or barrier of any kind.

Free out-patient public clinics are operated at Vancouver, Victoria, New Westminster, Trail, and Dawson Creek. A clinic is operated at Oakalla Prison Farm. Each year approximately 3,000 persons are admitted to the clinics, of which 2,000 are found infected and given treatment. The total clinic attendance averages 36,000 visits annually.

The Vancouver clinic, providing services for the Greater Vancouver area with a population of 392,000, is the largest clinic unit. Figure 2 portrays the accommodation features of this clinic. A full range of diagnostic and treatment services is available. Qualified consultants in the specialities of neurology, cardiology, pediatrics, dermatology, gynæcology, urology, and eye, ear, nose, and throat are on the staff. Short-term appointments for physicians in general practice enable the clinic to train interested men in the adequate management of venereal infection in private practice. Each year 2,500 persons are admitted for care. Associated with the clinic is a seven-bed hospital ward, situated in the infectious diseases hospital unit, Vancouver General Hospital. With the exception of the Vancouver clinic, all other clinics are operated on a

part-time out-patient basis. Hospital beds are available as required in adjacent community hospitals.

In much of the rural area, organization of clinic service has not been feasible. In these areas assistance reaches the citizen through the private physician who is given free medication, laboratory service, and written consultative service by the staff of the Vancouver clinic. Payment for services is available for indigent patients and in instances where epidemiological investigation is performed at the request of the Provincial Board of Health.

Free medication is supplied upon request to any qualified physician for any person reported by him as suffering from venereal infection. This medication includes a wide range of standard therapeutic agents, including arsenicals, bismuth, mercury, sulphonamides, and penicillin. Silver nitrate drops for the prevention of ophthalmia neonatorum are supplied to all hospitals. Each year more than 11,000 ampoules of arsenical for intravenous therapy and 25,000 c.c. of insoluble bismuth for intramuscular injection are distributed to private physicians.

SOCIAL SERVICE.

The social component in the problem of the venereal diseases is of such moment that a special section exists to deal with the matters pertaining to it. Since venereal infection is both "cause and effect" of social problems, the scope of this section is very broad.

A qualified medical social worker is in charge. She is responsible to the Director of the Division and to the Assistant Director of Welfare, Social Assistance Branch. She plans all social work related to the activity of the Division and co-ordinates social effort with Government and private social agencies.

The section has been established very recently and its staff is not up to full strength, being limited to two workers. Social workers are provided by the Social Assistance Branch. Activity is restricted to the Vancouver clinic where all juveniles, expectant mothers, and patients presenting special social problems are interviewed. All data referrable to "facilitation" are collected, analysed, and organized for community action. This action includes the stimulation of effort to correct unsavory community conditions associated with certain hotels, beer-parlours, dance-halls, restaurants, rooming-houses, bawdy-houses, etc., and interesting responsible community groups in the development of wholesome community recreation facilities, better housing, satisfactory leisure-time activities, etc.

Special studies and investigations are carried out as conditions merit them. Among these have been included a study of the environmental background of persons between the ages of 15 and 25 infected with syphilis and investigation of commercialized prostitution in the City of Vancouver.

As this section develops, its activities will be extended to the point of active liaison with all field social workers throughout the Province.

REPORT OF THE DIVISION OF TUBERCULOSIS CONTROL.

W. H. HATFIELD, M.D., DIRECTOR.

The work of the Division of Tuberculosis Control continues to increase, with the programme expanding according to a definitely laid-out plan. A greatly intensified case-finding drive during 1945 has located tuberculosis in an earlier stage and brought to light sources of infection and of potential infection. The improvement in social assistance to patients' families introduced in 1944 has shown its effect during 1945. With the increase in new cases, due to intensified case-finding and the return to the Province of many patients diagnosed by the armed forces, bed facilities are still much behind the requirements. The seventy-bed temporary addition was opened during the year, and plans are well under way for a new modern sanatorium in the Vancouver area. Property has been obtained, and it is hoped to start construction early in 1946. In addition to the provision of extra bed facilities, plans have been completed for the modernization of present institutions of the Division during the next year.

Staff difficulties have continued to confront us, there being a shortage of technically trained personnel, particularly physicians and nurses. Toward the end of the year it begins to appear for the first time that it will soon be possible to remedy this situation.

There has been expansion of the clinic facilities of the Division with a new clinic opening in the New Westminster area. New equipment has been ordered for all the stationary clinics to bring them up to the highest possible standard of diagnosis and out-patient treatment.

The general picture in British Columbia remains relatively the same as far as housing, the influx of cases of tuberculosis from other parts of Canada, and the racial problems, such as the Chinese, are concerned. The Japanese continue to be handled by the British Columbia Security Commission, a Dominion Government agency. Forward steps have been taken by the Indian Affairs Branch to help to reduce the very high tuberculosis rate amongst the native Indians of this Province. An official advisory committee on tuberculosis amongst Indians has been appointed by the Dominion Government, with the Director of the Division acting on behalf of British Columbia.

Case-finding work through mobile X-ray units has produced closer correlation between the work of the Division and that of local health services. The extent of this work has necessitated the opening of an office, for which funds have been provided by the British Columbia Tuberculosis Society, to co-ordinate and control the whole mass X-ray programme. These funds have been provided for one year to afford an opportunity to study the efficiency of such an organizing office. If it is successful, as apparently it is turning out to be, then the Department will be asked to take this over the following year.

With the increasing facilities in both hospitals and clinics, it is recommended that a general superintendent of nurses be appointed to the central office of the Division to supervise all nursing services within our hospitals and clinics and to correlate the work of the Division with other services.

With the size of the Division's budget and the scattered institutions, it has also been recommended that the position of central accountant be changed to

that of business manager. It is felt that the position is thus better described and that such an official is essential to the efficiency of the organization.

As problems in connection with food keep arising from time to time, it has been recommended that an official committee be appointed, composed of the dietitians of each of the units and the Provincial Nutritionist, who will at regular intervals survey and correlate the food services throughout the various hospitals operated by the Division.

During the year the Division had the privilege of initiating through the American Trudeau Society what is termed an " off the record " correspondence group. Through this international group we have been given opportunities of seeing material and taking part in discussions in advance of the ordinary scientific literature published in current medical journals.

The new regulations under the " Health Act " brought into effect during the year provide for compulsory isolation and, where necessary, institutionalization can be accomplished.

The need is still apparent for clarification of interprovincial problems, and we again recommend that a Dominion tuberculosis council be formed with representation from all Provinces. This might be accomplished by creating a division within the Department of Health and Welfare at Ottawa, but if such were done, the Provinces should have some voice in policy.

NEW CASES.

Pulmonary and Non-pulmonary.

	1941.	1942.	1943.	1944.	1945.
Total	1,342	1,432	1,688	2,317	2,081
Indians	270	327	419	580	416
Orientals	127	108	106	156	143
Whites	945	1,016	1,163	1,585	1,521

Pulmonary.

Total pulmonary—										
Total population	1,193		1,157		1,484		2,058		1,854	
Indian	221		254		345		498		334	
Other than Indian	972		903		1,139		1,560		1,520	
Minimal—										
Total population	454	(38%)	400	(35%)	593	(40%)	1,005	(49%)	1,003	(54%)
Indian	25	(12%)	61	(24%)	68	(20%)	108	(22%)	80	(24%)
Other than Indian	429	(44%)	339	(37%)	525	(46%)	897	(58%)	923	(61%)
Moderately advanced—										
Total population	310	(26%)	317	(27%)	357	(24%)	506	(25%)	430	(23%)
Indian	28	(13%)	57	(22%)	56	(16%)	94	(19%)	80	(24%)
Other than Indian	282	(29%)	260	(29%)	301	(26%)	412	(26%)	350	(23%)
Far advanced—										
Total population	357	(30%)	378	(33%)	389	(26%)	393	(19%)	263	(14%)
Indian	151	(68%)	118	(47%)	142	(41%)	203	(40%)	82	(25%)
Other than Indian	206	(22%)	260	(29%)	247	(22%)	190	(12%)	183	(12%)
Primary—										
Total population	56	(5%)	33	(3%)	122	(8%)	150	(7%)	148	(8%)
Indian	14	(6%)	6	(2%)	72	(21%)	93	(19%)	91	(27%)
Other than Indian	42	(4%)	27	(3%)	50	(4%)	57	(4%)	57	(4%)
Type not stated—										
Total population	16	(1%)	29	(2%)	23	(2%)	4	----	10	(1%)
Indian	3	(1%)	12	(5%)	7	(2%)	----	----	1	----
Other than Indian	13	(1%)	17	(2%)	16	(2%)	4	----	9	(1%)

At the end of 1945 there were 13,032 known cases of tuberculosis in the Province, giving a ratio of known cases to deaths of 25.2:1. With Indians excluded the number of known cases is 11,170, giving a ratio of known cases to deaths of 31.4:1. This is an increase of 4.2:1 over 1944. With the expanding programme in mass X-ray surveys, there is a natural increase in the number of known cases.

It is gratifying to note that these new cases are largely in the minimal group, many of them being found before they reach an infectious stage. Prompt treatment is thus possible, with some shortening of institutional stay and a higher percentage of cures. Our surveys have shown us a decrease in the amount of tuberculosis found in young people. For example, a survey of the high school students in the Vancouver area toward the end of the year did not reveal a single case. It is felt that this situation is due to the finding of tuberculosis in older people, and with prompt treatment and isolation thus preventing the older group spreading the disease to the younger generation. With a group growing up relatively free of tuberculosis, there should be a steady decline in the tuberculosis death-rate.

There has been an increase in the number of new cases found in the armed forces with all those discharged being routinely X-rayed and with many returning from the European front where they have had contact with populations with high tuberculosis rates. Of the total admissions to our institutions during 1945, 21.7 per cent. were from the armed forces, there being 182 cases out of 890 admissions.

MORTALITY.

During 1944 British Columbia had the greatest drop in death-rate of any Province in Canada. We are pleased in 1945 to be able to report a further reduction in death-rate. We reiterate that one or two years is not sufficient to show trends, although we have now had four years in which the death-rate has steadily decreased, and it is anticipated that this will continue.

Tuberculosis Mortality.

	Total Population.		Indians.		Other than Indians.	
	Deaths.	Rate per 100,000 Population.	Deaths.	Rate per 100,000 Population.	Deaths.	Rate per 100,000 Population.
1941	533	65.2	174	699.3	359	45.3
1942	558	64.1	170	682.7	388	45.9
1943	613	68.1	208	834.4	405	46.3
1944	532	57.1	169	677.1	363	40.0
1945*	518	54.6	162	648.5	356	38.5

* Preliminary only.

CLINICS.

The Division continues to operate four types of clinics: Stationary survey clinics, mobile survey clinics, stationary diagnostic clinics, and travelling consulting clinics.

The consultation service which is offered throughout the rural areas of the Province has been used most extensively during the year. At any time between the visits of travelling clinics any physician may have a patient X-rayed locally

at the expense of the Division and forward the film and consultation form for interpretation. With the development of X-ray units in local hospitals throughout the rural areas, this service is most effective. It assures every one within the Province of being able to have a diagnosis made any time there is suspicion of chest disease.

Two mobile units are in use, which during 1945 spent most of their time in the rural areas of the Province, ending up the year by beginning a mass X-ray survey of the Vancouver area. These two units X-rayed 89,572, and this coupled with the stationary survey clinics totalled 119,186, which is one out of eight in the Province X-rayed within the twelve-month period. Another mobile unit which is on order and is anticipated early in 1946 will provide greater facilities for this essential work. Of those X-rayed in all survey clinics, 2.4 per cent. were referred to diagnostic clinics for further study. The analysis of this group is as follows: 600, or 21.1 per cent., were diagnosed as tuberculous, and 70.3 per cent. of these cases were minimal, 20.7 per cent. moderately advanced, and 6.7 per cent. far advanced. One hundred and eighty-eight, or 31 per cent., of those diagnosed required active treatment.

With the increased number of cases going through survey clinics, the work of the diagnostic stationary and consulting travelling clinics tends to increase. In this phase of the work there were 24,590 examinations.

Including all types of clinics, there was a total of 144,478 examinations during the year, including tuberculin tests in surveys.

With the shortage of medical staff, the travelling consulting clinics have had to continue to function with nurse-technicians taking films and referring these films to centres for interpretation. It is hoped that during the ensuing year physicians will again be available to the Division for travelling consultative work.

The new clinic in New Westminster was officially opened in June, 1945, in a building constructed by the Gyro Club which houses both the Division of Tuberculosis Control and the Red Cross Society. The equipment for the chest clinic was furnished by the B.C. Tuberculosis Society through Christmas seals. Later in the year arrangements were made for the Division of Venereal Disease Control to have two sessions a week within this clinic.

Improvements have been recommended for the Victoria clinic. Up to the present time the Division has had to have its X-ray work done in the X-ray department of the Royal Jubilee Hospital. By close co-operation this has worked fairly effectively, but with the expanding survey and diagnostic work of the Division, it was felt that this could only be handled properly with the Victoria clinic operating its own X-ray services. Equipment for this is on order and has been provided by the B.C. Tuberculosis Society through Christmas seals.

Thus 1946 should see all diagnostic clinics adequately equipped. It is hoped that all travelling consulting clinics will have a physician with them, and there will be three mobile X-ray units for mass X-ray surveys in addition to miniature-film equipment in the three stationary clinics at Vancouver, Victoria, and New Westminster.

INSTITUTIONS.

As usual all institutions of the Division continue to work at full capacity. The total bed capacity is 705, an increase of 66 over the number of beds in 1944. By carefully planned central admitting, and careful control of those in hospital through medical conferences and ward rounds, and correlation of the patient to his family through the social service section, it has been possible to keep the waiting-list for admittance at a relatively low level. British Columbia continues to have the shortest interval between application for admission and admission of any Province in Canada.

Due to the shortage of beds, it has been necessary to limit admission to those cases which are infectious or potentially so, which means limiting treatment to cases of pulmonary tuberculosis. It is recommended that when sufficient beds are available the Division should admit all forms of tuberculosis for treatment. We have had to ask local hospitals to care for straight pleurisy or pleurisy-with-effusion cases. Such types would be better treated in a sanatorium.

The work from the Department of Veterans' Affairs continues to show an increase. In 1944 these cases represented 15 per cent. of all admissions and in 1945 were up to 21.7 per cent. The Department of Veterans' Affairs is planning a new 150-bed unit at Shaughnessy Hospital which, it is expected, will be primarily an admitting hospital for tuberculosis but will also handle other types of chest disease. It is to be pointed out that tuberculosis should not be handled as a problem of the individual but as a problem of the family. Thus it is essential that there be correlation between the Department of Veterans' Affairs and the Division of Tuberculosis Control of the Provincial Board of Health in the operation of this new hospital.

A site for the tuberculosis hospital in Vancouver has been obtained on Fifty-ninth Avenue between Heather and Cambie Streets, and at the end of the year the plans for construction are well on the road to completion.

It is necessary to again point out that the Division is still utilizing one floor of the Vancouver Isolation Hospital. This occupancy will sooner or later have to be terminated, and it is recommended that surgical facilities be provided in the present Vancouver unit of the Division.

A decision will have to be made as to the hospitalization of Japanese in British Columbia. The British Columbia Security Commission still continues to operate a sanatorium at New Denver. We feel that for future planning it should be known whether the Japanese are to continue as Dominion Government responsibilities or whether they are likely to revert to the Province from a health standpoint. If they are to become a Provincial responsibility, will segregation continue with the operation of the sanatorium at New Denver or will other facilities have to be provided?

The present St. Joseph's Oriental Hospital has been inadequate in capacity and facilities for the treatment of Chinese. It is understood that the sisters are planning an addition to be used for tuberculous patients in connection with their new hospital in Vancouver. It is understood that this is to be a temporary institution. The Division again recommends that it own and operate all its

own institutions rather than utilizing facilities that are part of local municipal or private hospitals.

At Tranquille it is planned to begin the modernizing programme as previously outlined. This will provide an addition to the nurses' home, improved housing conditions for medical staff, and improved facilities within the hospital itself, particularly in relation to the main building and the services connecting this building with the rest of the institution. A new laundry building will also be provided.

NURSING.

With the expansion of institutions and clinics, there are increasing nursing services throughout the Division, and it has been recommended that a general superintendent of nurses be appointed. This nurse would also correlate the work of the Division of Tuberculosis Control with other Divisions of the Provincial Board of Health and with local health services.

A continued staff-training programme has been carried out, keeping all nurses up to date, and it is felt that there has been a general improvement in nursing standards throughout the institutional services.

The Handbook of Tuberculosis was reprinted during the year and continues to serve as a general guide in both the training of student nurses and the programme of the Division.

The student nurses' programme continues to be unique in Canada and is proving very effective. All student nurses in the Province are now receiving a five-week course, three weeks of which is spent on the wards, one week in out-patient clinics, and one week in home-visiting. It is felt that this course not only helps the student to understand infectious disease technique, thus protecting her in her nursing career, but also has interested many of the younger nurses in the tuberculosis control programme. In addition, it has stimulated interest on the part of nurses in public health work. During 1945, 230 students completed their affiliation in tuberculosis at the Vancouver unit. The full-time trained teacher continues to supervise this course.

With continued expansion of public health nursing services in rural areas, there is a continued improvement in the follow-up of tuberculosis case in the home. This service is closely correlated with the institutional and clinic work of the Division and the service rendered by the Social Assistance Branch.

SOCIAL SERVICE.

The social service work of the Division is done by a group of trained social workers supplied to the Division by the Social Assistance Branch. There are trained medical social workers attached to each institution, doing both in-patient and out-patient work. The work outside of the institutions and clinics is done by the field staff of the Social Assistance Branch. During the year there were many changes in staff which naturally created some difficulties. There were improvements in the clerical services, which were made necessary by the larger volume of referrals. A part-time trained social worker was this year available to the Victoria unit and a second worker was added to the Tranquille staff.

Special tuberculosis allowances have now been in operation for a full year and their distinct value is beginning to unfold. They have materially aided in the cure of patients because of relief from anxiety concerning their families which previously existed. In addition, these allowances have facilitated the discharge of patients from hospital.

Boarding-home care has been further developed, but it is still not as extensive as needed. More facilities of this type are required for women patients in the older age group and for Chinese patients. The extension of comforts allowances to cases in boarding-homes has been helpful.

The Division appreciates the close co-operation that has existed between the Division and the Social Assistance Branch.

STATISTICS.

The ledger system introduced in 1944 has proven quite satisfactory and gives immediate statistics on the main fundamental operations of the Division. There has been every co-operation from the Division of Vital Statistics in giving special statistics from time to time, in reviewing our record systems, and in the preparation of the graphs and charts for the annual report.

LOCAL HEALTH SERVICES.

Every co-operation has been received from the local health services throughout the Province. One of the major activities of the Division in connection with local health services has been the furnishing of equipment and staff for mass X-ray surveys. In addition, consultative services are available to all areas.

BUDGET.

The budget for the next fiscal year has been completed, with increases primarily due to statutory increases in salary and operation of the temporary unit in Vancouver for twelve months as compared with ten months in the last fiscal year. A recommendation has been made to place all members of the staff on an eight-hour day. This is a material increase, particularly at the Tranquille unit. There will be an increased cost for mass X-ray surveys due to the addition of another unit. This unit will operate with a smaller type of film, which will decrease the *per capita* cost. With the expanding services of the Division, several recommendations have been made for staff reorganization. Other costs of the Division will be reflected in the estimates of the Public Works Department, with the improvements planned at Tranquille and the construction of a new sanatorium in the Vancouver area.

GENERAL REMARKS.

In general there was very little increase in the technical staff available to the Division during the year. It is hoped that with the war's end technical staff will be returning from the armed services, making more available to us.

During the year the Director of the Division attended the executive meeting of the Canadian Tuberculosis Association and a meeting at Ottawa of the advisory committee in connection with the control of tuberculosis amongst

Indians. It is hoped that during the ensuing year there will be an improvement in travelling facilities, which will allow members of the medical staff to attend certain national and international conferences.

The annual staff meeting of the Division was held in the month of October, with a full report of proceedings being prepared, which is available in the central office of the Division and the central office of the Provincial Board of Health.

A review of patients' literature has been initiated, and it is anticipated that there will shortly be many improvements in this regard.

The Division wishes to acknowledge the co-operation that it has received from the Metropolitan Health Committee, the local Health Units, Public Health Nurses, the Social Assistance Branch, and other Departments of the Government. Special mention must be made of the B.C. Tuberculosis Society, which was reorganized during the year to include all organizations in the Province dealing with Christmas seals. This voluntary organization now has nineteen local committees. The funds for special studies and certain equipment, notably X-ray equipment and mobile units, have been furnished by this organization. Funds for educational work are also provided by this society. This group is playing a real part in the tuberculosis work in this Province and has given the Division a great deal of support and assistance. The large sum of money raised by this organization through Christmas seals, where the average donation is $1 to $2, shows the very widespread interest of the general population in the tuberculosis problem in this Province.

The board of directors of the Vancouver Preventorium has continued to provide accommodation for children between the ages of 2 and 14. There has in general been a decrease in tuberculosis amongst this age-group and it is hoped that the Preventorium will be able to extend this service to the age-group from birth to 2 years. The Division of Tuberculosis Control is responsible for the admitting to this institution and the follow-up medical work, including X-ray examinations, laboratory and dental services at the Vancouver unit. Every co-operation has been given by the board of directors to the Division in respect to this work.

The extension of mass X-ray surveys, the improvement of stationary clinics, the return of staff to allow more intensified travelling diagnostic work, and the addition of more bed facilities will round out the programme of the Division of Tuberculosis Control which we hope will each year more and more bring about a steady reduction in the death-rate from this disease.

REPORT OF THE PUBLIC HEALTH ENGINEERING DIVISION.

R. Bowering, B.Sc. (C.E.), M.A.Sc., Public Health Engineer and Chief Sanitary Inspector.

The work of the Public Health Engineering Division includes supervision and control of such environmental factors as may have an effect on the public health. Water-supply sanitation, sewage-disposal, milk plant sanitation, cannery and industrial camp sanitation, shell-fish sanitation, and other miscel-

laneous items of environmental sanitation all come within the scope of the Division of Public Health Engineering.

The technical staff of the Division consists of a Public Health Engineer and Chief Sanitary Inspector who is Director of the Division, a public health veterinarian who has the title of Consultant in Food and Milk Control, and a certified Sanitary Inspector who has the title of Senior Sanitarian. The year 1945 was the first full year that the latter two officials were on the technical staff, and as a result the year saw considerable advance in certain phases of the work. In addition, an engineering student was employed during the summer months for special survey-work in connection with oyster-beds and cannery sanitation.

There was an increase in the number of certified Sanitary Inspectors available during 1945. The result is that all Sanitary Inspectors now working in full-time Health Units are fully certified men. The Director of the Division of Public Health Engineering served as chairman of the British Columbia board of examiners for the certificate which, on behalf of the Canadian Public Health Association, conducted the examinations leading to the certificate in sanitary inspection (Canada) for British Columbia in 1945. Although Sanitary Inspectors employed in local Health Units do not come under direct supervision of the Division of Public Health Engineering, the Division provides a consultative service for them. In this way the value of the special training of the technical staff of the Division is made much more available to the people on the local level.

WATER-SUPPLY.

One of the major functions of the Division of Public Health Engineering is in the field of water-supply sanitation. The "Health Act" requires that whenever a public water-supply is constructed, extended, or altered, the plans and specifications must be approved by the Provincial Board of Health before construction may commence. These plans are always gone over very carefully by the Division of Public Health Engineering, and a proper course of action to take in regard to these plans is recommended to the Provincial Health Officer.

Another important feature of the programme of the Division of Public Health Engineering is the sanitary survey of water-supplies in the Province. Since there are more than 150 separate water-supply systems in British Columbia, with the present staff it is impossible to make a thorough sanitary survey of these sources each year. However, the Division of Public Health Engineering of the Department of National Health and Welfare makes sanitary surveys of water-supplies used by common carriers. There is good co-operation between the Federal Department and the Provincial Department, and as a result a larger number of sanitary surveys are made than would be otherwise possible. It is interesting to note that over 75 per cent. of the population of the Province consume water from public water-supply systems.

The question of treatment of water for the better protection of the public health has been very much to the fore in 1945. Experience with the use of chlorination equipment in Greater Vancouver and Greater Victoria has shown that the results obtained by such treatment are worth while. Whereas in both cases bacteriological examinations of a large number of samples taken at the

source show that the untreated water will not meet the standard which had been approved by the Dominion Council of Health, samples taken from the distribution system in both communities have shown that the treated water is well within the standard. A large amount of data concerning the bacteriological quality of various water-supplies in the Province has been accumulated during 1945. These data will be used in guiding the Division into the proper emphasis to be placed on the water-supply sanitation programme in the future.

An interesting incident that occurred during the year was the sudden death of a number of fish, ducks, and muskrats at a lake on Vancouver Island. This lake is used as a water-supply by about forty littoral residents. A warning was posted advising these people not to use the water. The lake in the early stages had a high pH, a fairly high oxygen content, and a high lead content. The water of the lake apparently returned to normal after several weeks, as the pH, oxygen, and lead became normal again. Exhaustive investigations were made which led to the belief by most observers that the death of the animals was due to Type " C " Botulinus toxin. Type " C " Botulinus toxin is not harmful to man as far as is known. During the investigation it was found that many samples of water which were bacteriologically examined showed the presence of fæcal bacteria. These fæcal bacteria could not have caused the death of the animals mentioned but indicated that the water is not always safe for human consumption. For this reason, when the people were again told that they could use the water for drinking purposes, they were advised to boil or chlorinate the water as a safeguard against intestinal bacteria.

SEWAGE-DISPOSAL.

There are two general classifications of the sewerage and sewage-disposal problem in British Columbia. The first is the question of sewerage and sewage-disposal in organized municipalities, and the second is the problem of sewage-disposal in unorganized communities and rural areas.

The larger cities of the Province have sewerage systems. Since the largest cities are located on the sea coast, the most common method of sewage-disposal in British Columbia is by dilution in salt water. Although this method is generally satisfactory for the prevention of gross nuisances, some of the salt water bathing-beaches in the Province which are near sewered municipalities have a fairly high degree of fæcal contamination. All city health departments would be well advised to look into the question of the safety of water in the public bathing-beaches under their jurisdiction. In the Interior the Division of Public Health Engineering will stress the value of proper sewage treatment. In certain areas of the Province complete treatment of sewage is now insisted upon. Complete treatment includes primary filtration, secondary treatment of the effluent from the sedimentation process, final sedimentation, and chlorination of the effluent.

The sewage-treatment plant for the Village of Dawson Creek was put into operation during 1945. Several fairly large private sewerage jobs were completed also in 1945, including the sewerage system for the hospital at Fort St. John, B.C. This sewerage system was designed so that it could be extended to serve a portion of the town at some future date. Several cities had engineers

investigate the possibilities of building sewerage systems, and preliminary reports and plans have received provisional approval of the Provincial Board of Health. Included in these is an approval of a $750,000 extension in Vancouver for the second consecutive year.

The problem of sewering unorganized communities still exists, although a great deal of study has now been made on this problem by an interdepartmental committee under the chairmanship of the Provincial Health Officer. It is hoped that a report of this committee will be available for the Government early in 1946.

A large number of pamphlets and plans were given to private individuals wishing to construct sewage-disposal units in rural homes. Many nuisances caused by improper construction of septic tanks, and particularly by improper construction of agricultural tile beds used for the absorption of the effluent into the soil, were abated during the year by improving the construction of these devices upon the advice of the Division of Public Health Engineering. The number of complaints concerning faulty sewage-disposal were not as great in 1945 as they were in former years.

MILK SANITATION.

The year 1945 saw considerable advance made by the Division of Public Health Engineering in milk sanitation. The Consultant in Food and Milk Control, at the request of local authorities, made several surveys of the milk-supplies available to local communities. Among these were Prince George, Quesnel, Powell River and Westview, Kimberley, Michel-Natal, and Fernie. As a result a considerable amount of interest in safe milk has been evidenced throughout the Province. New milk-pasteurization plants have been put into operation during the year in Nanaimo, Port Alberni, Alberni, Quesnel, Langley Prairie, Powell River, Courtenay, and Armstrong. The Pacific Great Eastern Railway has changed over from the use of raw milk to the use of pasteurized milk in its dining-cars.

In the spring of 1945 there was a spectacular epidemic of septic sore throat at Salmon Arm. Investigation by officials of the North Okanagan Health Unit and the Provincial Board of Health showed this epidemic to be milk-borne. In the latter part of the year a similar epidemic occurred at Powell River. Investigation has led to the belief that this was also a milk-borne epidemic.

Another service of the Division in 1945 has been the preparation by the Consultant in Milk and Food Control of model by-laws to be used by municipalities for the better supervision of the local milk-supply. This has resulted in the adoption by a large number of municipalities of a milk by-law which is modern and leads to the use of a safer and better milk in many of our communities.

At the close of the year the Division had information concerning plans of a number of new pasteurization plants. By the end of 1946 it is estimated that there will be very few large communities in the Province in which pasteurized milk will not be available.

SHELL-FISH SANITATION.

In the field of shell-fish sanitation, the largest individual piece of work done in 1945 was a fairly complete sanitary survey of Ladysmith Harbour. This harbour is probably the largest shell-fish growing area in British Columbia. The survey was made in co-operation with the Public Health Engineering Division of the Department of National Health and Welfare. The result of the survey has made it possible for a line to be drawn on the map of the harbour between the areas where it is considered safe for the production of shell-fish and the areas where it is not safe. This means that when applications to the Department of Lands for leases are received, and referred to the Provincial Board of Health, that a recommendation can be made with respect to leases applied for in Ladysmith Harbour by return mail. It also means that there are no shell-fish in Ladysmith Harbour now being produced on contaminated beds.

Toward the end of the year it was brought to the attention of the Division that oysters were being taken from contaminated ground on a free basis. In 1946 the most important of these so-called free oyster grounds will be examined in order to protect the public from shell-fish products produced on contaminated ground.

In the coming year the supervision of sanitation in plants handling and shucking oysters and other shell-fish will be handed over to the Consultant in Food and Milk Control. Sanitary surveys of oyster-producing areas will still be done by the Public Health Engineer.

In connection with the problem of clam and mussel poisoning that was apparent on the west coast of Vancouver Island for the past two or three years, a committee with representatives from both Federal and Provincial Departments of Fisheries and Health was formed under the chairmanship of the Provincial Health Officer. This committee has formulated a plan, and the plan is being carried out, for the further study of shell-fish poisoning with a view to adopting a permanent programme with respect to the closing and opening of seasons for the taking of clams and mussels in the affected area. No deaths from shell-fish poisoning have occurred in British Columbia since the original emergency ban was placed on the taking of shell-fish from the west coast of Vancouver Island in May, 1942.

CANNERY SANITATION.

A considerable amount of space was devoted to the subject of cannery sanitation in the report for 1944. During that year a very complete sanitary survey of most of the fish-canneries was made. In 1945 the reports of the survey-work done in 1944 were made available to the owners and operators of the various fish-canneries. The result has been that most of the larger operators are planning to improve living and housing conditions at canneries by the construction of more modern-type housing units, and by improving the various other features of environmental sanitation. It is felt that this work has been appreciated both by the cannery operators and by the Native Brotherhood of British Columbia. It is believed that during the next few years most of the undesirable features of our fish-cannery camps will be eliminated.

INDUSTRIAL CAMP SANITATION.

Considerably more attention to industrial camp sanitation was given by the Division of Public Health Engineering in 1945 than in any other past year. This was due mainly to the fact that the Senior Sanitarian devoted a major portion of his time to this important work. A large number of industrial camps of various kinds were inspected, and instruction and helpful advice were given to operators of such camps that has helped considerably in improving the living conditions of men whose work compels them to live in camps. The Senior Sanitarian has advised camp operators on various items of industrial camp sanitation such as water-supply, rodent-control, vermin-control, food-handling methods, and the question of sewage-disposal.

One of the interesting points that was noted with regard to the sanitation in bunk-houses was that where a bunk-house was finished inside with a smooth finish, and painted with a light-coloured paint and was well lighted, a much better atmosphere prevailed in the bunk-house. It was noted that the better the provision made for the health and comfort of the men, the more the men responded in doing their share to maintain the camp in a sanitary condition.

THE USE OF D.D.T. IN INSECT-CONTROL.

One of the features of environmental sanitation that was notable during the year was the effects of the greater use of D.D.T. as an insecticide. During 1945 D.D.T. was released by the Controller of Chemicals for general use. Trial work with D.D.T. has been carried on by a number of the Sanitary Inspectors employed by local Health Units. This work has shown that D.D.T. will have a very useful place in the control of the house-fly, bedbugs, cockroaches, and other insects which infest the dwelling-places of men.

SANITARY COMPLAINTS.

Sanitary complaints are complaints of nuisances which are brought to the attention of the Division of Public Health Engineering by various people throughout the Province. Most of these complaints are of minor importance, although a considerable amount of time is often required in their investigation. Some of them on the other hand are rather important, and they serve the purpose of bringing to the attention of the Division various matters that are of importance in the making of a more sanitary and healthful environment for the people.

Most of these complaints concern the disposal of septic-tank effluent into ditches and small watercourses. The Division has had a considerable amount of success in instructing people as to how to abate these nuisances by better construction of septic-tank sewage-disposal systems. In some areas the problems can only be solved by the construction of public sewerage systems. In one community of the Province, the Department of Public Works built a storm sewerage system which has had a great deal of value in eliminating public health nuisances.

One of the more usual type of complaint relates to the collection and disposal of garbage in unorganized communities. In many instances these prob-

lems can not be solved without the expenditure of money. This problem is being investigated by the interdepartmental committee which has been formed to investigate sanitary conditions in local communities. The Division issues plans of a small incinerator to those interested in the problem of incineration of garbage. The Division has also, for the benefit of certain municipalities, issued instructions as to the operation and maintenance of sanitary garbage fills.

In general the number of complaints was not as great during 1945 as they have been in past years. This is probably due to the fact that a number of conditions which have been occurring annually, causing complaints, have been abated permanently by proper application of public health engineering principles to public health problems.

AUTO CAMPS AND SUMMER RESORTS.

In 1945 a " Tourist Camp Regulation Act " was passed by the Legislature. Under this Act the Lieutenant-Governor in Council is given power to pass regulations for the control of the tourist industry. A set of regulations was passed therefore which deal with, among other things, sanitation and public health problems in tourist resorts. A licensing board was established consisting of five members drawn from various Departments of the Government, and the Public Health Engineer of the Provincial Board of Health was appointed to the board.

In the past the question of auto-camp and tourist-resort sanitation has not been given the full attention that it deserves due partially to lack of authority and partially to lack of staff. However, with the passing of the " Tourist Camp Regulation Act " and regulations, all resorts in the Province must live up to a minimum set of sanitary standards or be endangered of losing their licences.

In the beginning of 1946 a sanitarian with wide experience will be appointed to the staff of the Division of Public Health Engineering to take charge of the sanitary inspection of auto camps and summer resorts. This official will personally inspect camps in areas where there are no local full-time health services. Where there are local full-time health services, much of the sanitary inspection-work will be done by the local Sanitary Inspectors. Their work will be co-ordinated by the new sanitarian who will be placed in charge of this work.

GENERAL OBSERVATIONS.

The year 1945 has been a year in which a very much more extended programme has been carried on by the Division of Public Health Engineering. The increase in staff that was noted in the 1944 report enabled the Division to extend its services throughout the whole year. This expansion in the number of technical personnel employed by the Division has also helped the local Sanitary Inspectors in providing for them a better consultative service. The fact that all Sanitary Inspectors employed by Health Units are now fully certified men has improved the quality of the work being done in the Health Units.

The Division would like to again record its thanks to the Division of Laboratories for its co-operation in the examination of samples of water, sew-

age, and milk, and for technical advice in the interpretation of certain laboratory reports. The Provincial Police deserve mention for their valuable work in inspection of sanitary complaints in outlying districts. The Division would also like to thank officials of the Federal Division of Public Health Engineering of the Department of National Health and Welfare for their whole-hearted co-operation on mutual problems. The Division also desires to acknowledge with thanks the unstinted and valuable assistance rendered by other members and staff of the Provincial Board of Health.

TABLE SHOWING RETURN OF CASES OF NOTIFIABLE DISEASE IN THE PROVINCE OF BRITISH COLUMBIA FOR THE YEAR 1945.

	Cancer.	Cer. Sp. Meningitis.	Chicken-pox.	Conjunctivitis (Acute).	Diphtheria.	Dysentery (all Forms).	Epidemic Hepatitis.	Erysipelas.	Gonorrhœa.	Influenza.	Measles.	Mumps.	Ophthalmia Neonat.	Paratyphoid Fever.	Poliomyelitis.	Rheumatic Fever.	Rubella.	Salmonellosis.	Scarlet Fever.	Septic Sore Throat.	Syphilis.	Tetanus.	Tick Paralysis.	Trachoma.	Tuberculosis.	Vincent's Angina.	Typhoid Fever.	Undulant Fever.	Whooping-cough.	Total.
Abbotsford and district		1	107	3							100	38					8		17			1						1		276
Agassiz								3			23	1					3													30
Alert Bay			16		3						1	2							15										3	40
Armstrong			23				16				48	1															1		2	91
Ashcroft			3								45	1																		49
Atlin											2																			2
Bella Bella			1			6				12	30	2																		51
Bella Coola						7														1										8
Blubber Bay			5	3							9																			17
Bralorne			3																3	2			1					1		10
Britannia Beach			4			11					2	1								6										24
Burns Lake		2	1																											3
Campbell River			2								9								5											16
Castlegar			13				3				121	3							1											141
Ceepeecee																													8	8
Central Vancouver Island Health Unit			192			101	1	1			287	49					28		24	3									7	693
Chase			4			11		1												1									5	22
Chemainus			21								65	2							5							1			13	107
Chilliwack			93								240	6			1				52								2	2	11	407
Cloverdale								1				1							3			1								6
Coal Creek			16	12			3				19	29							1										2	82
Cobble Hill			25								30						2													57
Coquitlam							2				12							2	1											17
Courtenay			140	55		1	64	3		36	88	14		1	2		1		17	8							1	1		432
Cranbrook			4					1			68																			73
Creston			262	26			7	1			62	100					6													464
Cumberland			25					1			21								8										1	56
Duncan			100	6	1						101	3					12		9	3								1	3	239
Enderby			1				1			4	32	6					4			7									3	58
Esquimalt			46		4						33	7			2		1		7	1										101
Carried forward		3	1,107	105	8	137	97	12		52	1,448	266		1	5		65	2	168	32		2	1			1	4	6	58	3,580

Table showing Return of Cases of Notifiable Disease in the Province of British Columbia for the Year 1945—*Continued.*

	Cancer.	Cer. Sp. Meningitis.	Chicken-pox.	Conjunctivitis (Acute).	Diphtheria.	Dysentery (all Forms).	Epidemic Hepatitis.	Erysipelas.	Gonorrhœa.	Influenza.	Measles.	Mumps.	Ophthalmia Neonat.	Paratyphoid Fever.	Poliomyelitis.	Rheumatic Fever.	Rubella.	Salmonellosis.	Scarlet Fever.	Septic Sore Throat.	Syphilis.	Tetanus.	Tick Paralysis.	Trachoma.	Tuberculosis.	Vincent's Angina.	Typhoid Fever.	Undulant Fever.	Whooping-cough.	Total.
Brought forward		3	1,107	105	8	137	97	12		52	1,448	266		1	5		65	2	168	32		2	1			1	4	6	58	3,580
Essondale																												1		1
Fernie			30	100							5	15							4											154
Field				14							2								1										1	18
Fraser Lake											8																			8
Garden Bay											6																			6
Gibsons Landing			3								106	3					4												33	149
Golden			1	2				1			6	1																		11
Granthams Landing																														
Grand Forks					4						15	20							2								1			42
Greenwood			7	6							17	2					2												4	38
Hammond										23	2									1								1		27
Hazelton											6						1													7
Hedley			7	1			5			1	9						1													24
Invermere			2					1			4						25		6											38
Ioco																	1													1
James Island											1																			1
Kamloops			53	1							169	1			11		1	1	8	1									6	1	253
Kaslo			1								1						2													4
Keremeos																														
Kimberley		1	1								299						1		3											305
Ladner			31								113	1							6										2	153
Lake Cowichan											25								1											26
Langley Prairie		1	9		5		4				173	12					1		9	4		2							16	236
Lillooet											27																			27
Lytton			15				17				140									3										175
McBride			2									2					3			3										10
Masset																														
Mayne Island								1				1																		2
Merritt			33								7																			40
Michel			2							8		1					2		3											16

Mission City			17	2			8	2			17	24							5	8								1		84
Nakusp			1								110	1			1				3											116
Nelson			216	12				4			42	7					9		50	15										355
New Denver			12	4			4			4	5								5											34
New Westminster		1	45				92	6			429	29	1		2		1	1	20			1						1	2	631
North Okanagan Health Unit			93	9		5	4	2			131	9					22		6	6									1	288
Oak Bay			150								37	6					50		13									1	12	269
Ocean Falls			10								14	1																		25
Okanagan Valley Health Unit			113	138			5	1			569	18					1		20	3									45	913
Oliver			4				25				19	2					30		1	8										89
Peace River Health Unit			66				54	1		3	2	92				2	20		12	1									9	262
Pender Island																														
Port Alice												1																		1
Port Coquitlam																														
Port Haney			35								4						3		2											44
Port Hardy																														
Port Moody			31			2					34	5																		72
Port Simpson			2		1						1																			4
Powell River			30					1			18	41					3			112									1	206
Premier											1																			1
Prince George			5								4	11					1		6	11									3	41
Prince Rupert Health Unit			14	3	2						84	1					5		4	1										114
Princeton			14	9							162						19		1											205
Qualicum Beach																														
Queen Charlotte			3								3	3																		9
Quesnel			8			36								25	9				41	1									14	134
Revelstoke			4					5		3	5						5		3	1									1	27
Rock Bay																														
Saanich			323	44	1		1	2			396	118			1		57		51	4									3	42	1,043
Salmo																														
Salmon Arm		1	2	9			2	1		11	10						1			107										144
Saltspring Island			10							138	3									28										179
Sardis																												1		1
Sechelt																		1												1
Sidney			11							8	36	9					4		2										4	74
Slocan City			21			4				3	3																			31
Smithers			7							40	1						15			2										65
Sooke			86	15			22	4		1	136				1		10		11	2									11	299
Squamish										21	13	1						1												36
Tashme											7	1			1					1										10
Telegraph Creek			3			3				15																				21
Terrace																														
Tofino			5					2		4	11	1					3			4									3	33
Carried forward		7	2,645	474	21	187	340	46		335	4,896	706	1	26	31	2	368	6	467	359		5	1			1	5	21	263	11,213

Table showing Return of Cases of Notifiable Disease in the Province of British Columbia for the Year 1945—*Continued.*

	Cancer.	Cer. Sp. Meningitis.	Chicken-pox.	Conjunctivitis (Acute).	Diphtheria.	Dysentery (all Forms).	Epidemic Hepatitis.	Erysipelas.	Gonorrhœa.	Influenza.	Measles.	Mumps.	Ophthalmia Neonat.	Paratyphoid Fever.	Poliomyelitis.	Rheumatic Fever.	Rubella.	Salmonellosis.	Scarlet Fever.	Septic Sore Throat.	Syphilis.	Tetanus.	Tick Paralysis.	Trachoma.	Tuberculosis.	Vincent's Angina.	Typhoid Fever.	Undulant Fever.	Whooping-cough.	Total.
Brought forward	.....	7	2,645	474	21	187	340	46	.....	335	4,896	706	1	26	31	2	368	6	467	359	.....	5	1	.....	.....	1	5	21	263	11,213
Trail	.....	1	45	.....	.....	.....	.....	.....	.....	.....	298	30	.....	.....	2	.....	12	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	394
Vancouver Metropolitan Health Committee	.....	15	1,276	.....	15	20	50	26	.....	18	3,097	252	.....	2	17	.....	277	39	462	.....	.....	.....	.....	.....	.....	.....	.....	3	133	5,702
Vanderhoof	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	4	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	11
Victoria	.....	1	644	.....	.....	.....	.....	.....	.....	3	692	56	.....	.....	.....	.....	79	.....	72	.....	.....	.....	.....	1	.....	.....	.....	.....	114	1,662
Wells	.....	.....	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	52
White Rock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Williams Lake	.....	1	4	1	.....	.....	.....	.....	.....	.....	4	2	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	3	.....	.....	.....	.....	2	19
Woodfibre	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	34
Whole Province—																														
Cancer	1,979	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,979
Gonorrhœa	.....	.....	.....	.....	.....	.....	.....	.....	3,053	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,053
Syphilis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,452	.....	.....	.....	.....	.....	.....	.....	.....	1,452
Tuberculosis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,015	.....	.....	.....	.....	2,015
Non-resident	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Totals	1,979	25	4,654	477	36	207	390	72	3,053	356	9,021	1,050	1	28	51	2	737	46	1,009	365	1,452	5	1	4	2,015	1	5	24	522	27,588

VICTORIA, B.C.:
Printed by Charles F. Banfield, Printer to the King's Most Excellent Majesty.
1946.

805-246-3121